



U.S. Department
of Transportation
**Federal Aviation
Administration**



SDR

Summary

Service Difficulty Reporting

January 18, 1998 - January 24, 1998

GENERAL AVIATION, ZAC-327

You can improve Air Safety by reporting the problem when you see it!

SECTION

- I Significant Occurrence Report
- II Domestic Service Difficulty Report
- III International Service Difficulty Report
- IV SDR Totals by District Office
- V Index By Aircraft Make and Model
- VI Joint Aircraft System/Component Code Table

ISSUE: 98-04



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SDR SUMMARY

General Aviation, ZAC-327



This summary includes domestic (United States) Service Difficulty Reports (SDRs) entered into the data base for aircraft weighing 12,500 lbs. and below. It also includes reports on aeronautical products (engines, propellers, and components), and all helicopters. A separate section for International SDRs for aircraft weighing 12,500 lbs. and under has also been included. Under a data exchange agreement, International SDRs are submitted to the FAA by the Civil Aviation Authority of other countries (currently, Canada - CAN, and Australia - AUS). All reports are sorted by aircraft make, model group (basic model), and Joint Aircraft System/Component (JASC) code. Within each aircraft model group, the specific model shown may vary, but similar types of reports will be grouped together and listed in ascending order by their JASC code. Each field contains all information submitted to the FAA. Some fields are not included in order to make the summary easier to read. Additional information may be obtained by referring to the "operator control number." Send your request to the Aviation Data Systems Branch, AFS-620 at the address or phone below.

The Regulatory Support Division (AFS-600) has established a "HomePage" on the Internet through which the same information is available. There is a large quantity of other information available through the AFS-600 HomePage such as the most current SDR system codes (i.e., Joint Aircraft System/Component Codes). The SDR Question and Answer Section of the Summary will also be transferred to the AFS-600 HomePage to simplify the process of preparing the SDR Summaries in the PDF format each week. There are "hot buttons" to take you to other locations and sites where FAA Flight Standards Service Information is available. The AFS-600 "HomePage" address is:

<http://www.mmac.jccbi.gov/afs/afs600>

"The Service Difficulty Reports in this publication are derived from unverified information submitted by the aviation community without FAA verification for accuracy. The number of SDRs submitted is not an indication of the mechanical reliability or fitness of an airline or individual operator, and the information should not be used as such."

Comments are welcomed and may be directed to:

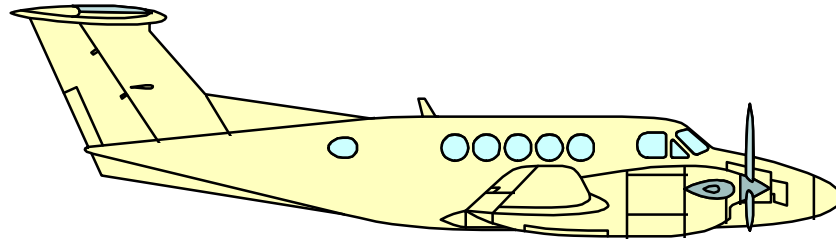
*Federal Aviation Administration
Aviation Data Systems Branch, AFS-620
P.O. Box 25082
Oklahoma City, OK 73125-5029
Phone: (405) 954-4171, Fax: (405) 954-4748*

Your continued participation is essential and is an integral part of ensuring aviation safety. Thank you for supporting the Service Difficulty Program! If you have any questions regarding this special notice you can contact John Jackson at (405) 954-6486, or Jim Gillespie at (405) 954-1141, or Blake McDonald at (405) 954-0307 in the Aviation Systems Branch (AFS-620). Their E-mail addresses are:

john_e_jackson@mmacmail.jccbi.gov

james_gillespie@mmacmail.jccbi.gov

blake_mcdonald@mmacmail.jccbi.gov



SIGNIFICANT OCCURRENCE REPORT





U.S. Department
of Transportation
**Federal Aviation
Administration**

THE SIGNIFICANT OCCURRENCE REPORT



The Significant Occurrence Report is a compilation all of the star bordered reports that appear in the General Aviation Service Difficulty Report (SDR) Summary, ZAC-327. The Significant Occurrence Report is used to highlight industry problem areas to field inspectors and the aviation public.

Limited analysis is performed by the Aviation Data Systems Branch, AFS-620 during the preparation of the "Significant Occurrence Report", which is generated each week and is included in the front of the Air Carrier SDR Summary. Significant Reports are hand selected by AFS-620's inspectors based on the individual merit of each report. The criteria for selection includes, but is not limited to, items that indicate high failure rates; items related to accidents or incidents; or design or maintenance failures which may affect the safe operation of the aircraft.

In some cases, this limited analysis of SDR data leads to the preparation of information bulletins which are routed to the appropriate product certification office for further investigation of the problem. The end result may be the issuance of an airworthiness directive (AD) by the Aircraft Certification Service (AIR) if warranted.

The Significant Occurrence Report (section I) of the weekly SDR Summary is not intended to be a summary of all significant events and should not be used as such. We recommend that you review further the applicable sections of the SDR summary that may be of interest.

GENERAL AVIATION SIGNIFICANT OCCURRENCE REPORT

1/18/98 - 1/24/98 ISSUE: 98-04 ZAC-327

ATA OPER	REG. NO SERIAL NO	ACFT MAKE ACFT MODEL	ENG MAKE ENG MDL	PROP MAKE PROP MDL	COMP MFG COMP MDL	PART NAME PART NUMBER	PART COND PART LOC.	TT TSO	DIFF. DATE OPER CONT NO
6720 ZV1R		BELL 206L1				BELLCRANK 2060017631	MISMANUFACTURED ANTI TORQUE	12/17/97 98ZZZX289	
*****	DURING REPLACEMENT OF COMPONENTS FOUND COULD NOT RIG TAIL ROTOR FOR FULL PEDAL MOVEMENT. TROUBLESHOOTING FOUND THAT BELLCRANK P/N 206-001-763-1 AND ROD ASSY P/N 206-011-751-101 WERE CONTACTING. FOUND THAT BELLCRANK DID NOT HAVE THE PROPER DEPTH GROOVE MACHINED IN IT. FOUND 2 OTHER BELLCRANKS IN STOCK WITH SAME PROBLEM. BELL WAS CONTACTED.								
3230	5332A 35532	CESSNA 310				IDLER BELLCRANK 0842102	FAILED NLG RETRACT	4130 98ZZZX229	1/1/98
*****	PILOT AND 1 PASSENGER DEPARTED ON A LOCAL VFR FLIGHT. UPON RETRACTING LANDING GEAR, PILOT HEAR A LOUD THUMP AND AT THE SAME TIME, FELT A THUD UNDER HIS FEET. THE LANDING GEAR UP INDICATION NEVER ILLUMINATED. PILOT CHECKED TIP-TANK MIRRORS AND CONFIRMED THE NOSE GEAR WAS ONLY PARTIALLY RETRACTED. ALL EFFORTS ON PILOT'S PART TO EXTEND NOSE GEAR UNSUCCESSFUL. INVESTIGATION REVEALED THE IDLER BELLCRANK, PN 0842102, HAD FAILED. IDLER BELLCRANK IS PART OF LANDING GEAR RETRACTION SYSTEM THAT CONTROLS NOSE GEAR. SPECIFIC LOCATION OF THIS PART IS JUST BELOW FLOORBOARD FWD OF PILOT'S SEAT. BELLCRANK CONNECTS GEAR DRIVE TUBE FROM GEARBOX TO REST OF NOSE GEAR RETRACTION SYSTEM.								
5711	42752 347450172	PIPER PA34200				RIB 7850002	BROKEN WS 69.24	12/17/97 98ZZZX231	
*****	THE FALSE SPAR AND WING RIB AT STA 69.24 ON THE LEFT WING WERE FOUND BROKEN AT THE 100-HOUR INSPECTION. SUBMITTER BELIEVES IT WAS CAUSED BY A HARD OR FAST LANDING, ALTHOUGH NONE WERE REPORTED. AD 73-11-02 REFERS TO THIS PROBLEM, HOWEVER, DOES NOT APPLY TO THIS S/N ACFT. PIPER KIT 760-696V IS INSTALLED. REPAIR WILL BE DONE BY INSTALLATION OF NEW RIB AND FAKE SPAR.								
3230 JGVR	811DA 428001029	PIPER PA42				RETRACT LINK 423072	CRACKED LT MLG	4890 98ZZZX235	12/23/97
*****	DURING ROUTINE INSPECTION, 250-HOUR MAGNAFLUX INSPECTION PERFORMED ON RETRACT ARM LINK. LEFT LINK WAS FOUND CRACKED. TIME SINCE LAST INSPECTION, 107 HOURS. NOTE: PA42 MM CONTAINS NO NDT INSTRUCTIONS OR WHAT TYPE OF NDT TO BE USED DURING THIS INSPECTION. LANDINGS, 5,062.								

(End of GENERAL AVIATION SIGNIFICANT OCCURRENCE REPORT)

Run Date: 30-Jan-98

FEDERAL AVIATION ADMINISTRATION
SIGNIFICANT OCCURRENCE REPORT INDEX

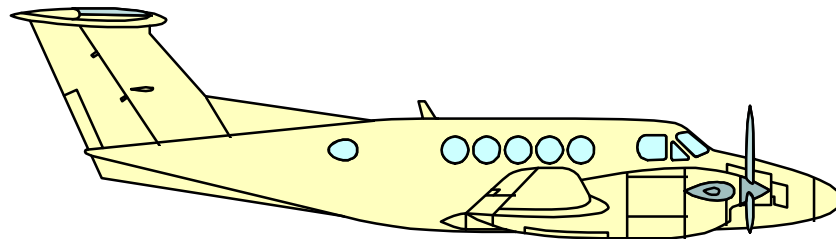
Showing Specific Part Numbers and Aircraft Model by Year

FOR THE PERIOD OF: 1/18/98 To 1/24/98

<u>PART NUMBER</u>			<u>YEAR</u>											
<u>PART NAME</u>	<u>ACFT MODEL</u>	<u>TOTAL</u>	<u>1987</u>	<u>1988</u>	<u>1989</u>	<u>1990</u>	<u>1991</u>	<u>1992</u>	<u>1993</u>	<u>1994</u>	<u>1995</u>	<u>1996</u>	<u>1997</u>	<u>1998</u>
0842102														
BELLCRANK	310Q	1	-	-	-	-	-	-	-	-	1	-	-	-
IDLER BELLCRANK	310	1	-	-	-	-	-	-	-	-	-	-	-	1
TOTAL of # 0842102 - - - - -		2	-	-	-	-	-	-	-	-	1	-	-	1
2060017631														
BELLCRANK	206L1	2	-	-	-	-	-	1	-	-	-	-	-	1
TOTAL of # 2060017631 - - - - -		2	-	-	-	-	-	1	-	-	-	-	-	1
423072														
RETRACT LINK	PA42	1	-	-	-	-	-	-	-	-	-	-	-	1
TOTAL of # 423072 - - - - -		1	-	-	-	-	-	-	-	-	-	-	-	1
5642920503														
SUPPORT ASSY	DC8*	1	-	-	-	-	-	-	-	-	-	-	-	1
TOTAL of # 5642920503 - - - - -		1	-	-	-	-	-	-	-	-	-	-	-	1
7850002														
RIB	PA34200	1	-	-	-	-	-	-	-	-	-	-	-	1
TOTAL of # 7850002 - - - - -		1	-	-	-	-	-	-	-	-	-	-	-	1
CF6RHFRAF1														
THRUST REVERSER	A300B4203	1	-	-	-	-	-	-	-	-	-	-	-	1
TOTAL of # CF6RHFRAF1 - - - - -		1	-	-	-	-	-	-	-	-	-	-	-	1
RA8987														
GASKET	PA31350	1	-	-	-	-	-	-	-	-	-	1	-	-
	unknown	1	-	-	-	-	-	-	-	-	-	-	-	1
TOTAL of # RA8987 - - - - -		2	-	-	-	-	-	-	-	-	-	1	-	1
TOTAL for ALL (9) PART NUMBERS: - - - - -		10	-	-	-	-	-	1	-	-	1	1	-	7
END OF SIGNIFICANT OCCURRENCE REPORT INDEX														



DOMESTIC SERVICE DIFFICULTY REPORT



DOMESTIC SERVICE DIFFICULTY REPORT SUMMARY - AIRCRAFT**1/18/98 - 1/24/98 ISSUE: 98-04 ZAC-327**

ATA OPER	REG. NO SERIAL NO	ACFT MAKE ACFT MODEL	ENG MAKE ENG MDL	PROP MAKE PROP MDL	COMP MFG COMP MDL	PART NAME PART NUMBER	PART COND PART LOC.	TT TSO	DIFF. DATE OPER CONT NO
2810	182DL 18264512	CESSNA 182P				SEAL	LEAK TANK CAP		5/15/96 98ZZZX226
SEALS FOR PLASTIC TYPE FUEL CAPS SUPPLIED WITH AIRCRAFT ARE NO LONGER AVAILABLE. DESIGN OF FUEL TANK OPENINGS (FLUSH MOUNT) ALLOWS WATER TO ENTER FUEL TANK IF SEAL INTEGRITY IS LOST.									
3222	61301 18504144	CESSNA A185F				CYLINDER ASSY 6960311	FAILED NLG STRUT	5000	12/9/97 98ZZZX233
NLG STRUT ATTACH FAILED ON NOSE WHEELS. FLOATS HAVE A HISTORY OF SHIMMY PROBLEMS. THE STRUT UPPER ATTACHMENT BRACKETS MAY HAVE BEEN WEAKENED OVER TIME DUE TO THIS CONDITION. THEY MAY ALSO HAVE BEEN WEAKENED DUE TO NUMEROUS BOW-TYPE DOCKINGS. PART SHOWED NO RUST OR OTHER PROBLEMS BY VISIBLE INSPECTION.									
3240	727FX 208B0468	CESSNA 208B			PARKERHANFIN 30182	ANCHOR BOLT 6919	MISMANUFACTURED BRAKE CALIPER	795	12/18/97 98ZZZX234
BRAKE CALIPER PINS (ANCHOR BOLTS) WERE SHORTER THAN PINS INSTALLED ON OTHER BRAKE CALIPERS. THIS WAS A NEW BRAKE ASSEMBLY INSTALLED ON A NEW AIRCRAFT RECEIVED FROM FACTORY. RETURNED TO BRAKE MANUFACTURER FOR REPAIR.									
3230	5332A 35532	CESSNA 310				IDLER BELLCRANK 0842102	FAILED NLG RETRACT	4130	1/1/98 98ZZZX229
*****	PILOT AND 1 PASSENGER DEPARTED ON A LOCAL VFR FLIGHT. UPON RETRACTING LANDING GEAR, PILOT HEAR A LOUD THUMP AND AT THE SAME TIME, FELT A THUD UNDER HIS FEET. THE LANDING GEAR UP INDICATION NEVER ILLUMINATED. PILOT CHECKED TIP-TANK MIRRORS AND CONFIRMED THE NOSE GEAR WAS ONLY PARTIALLY RETRACTED. ALL EFFORTS ON PILOT'S PART TO EXTEND NOSE GEAR UNSUCCESSFUL. INVESTIGATION REVEALED THE IDLER BELLCRANK, PN 0842102, HAD FAILED. IDLER BELLCRANK IS PART OF LANDING GEAR RETRACTION SYSTEM THAT CONTROLS NOSE GEAR. SPECIFIC LOCATION OF THIS PART IS JUST BELOW FLOORBOARD FWD OF PILOT'S SEAT. BELLCRANK CONNECTS GEAR DRIVE TUBE FROM GEARBOX TO REST OF NOSE GEAR RETRACTION SYSTEM.								
2510 DWSR	650DB 414A0853	CESSNA 414A				PIVOT ARM 08127358	BROKEN PILOT SEAT	3061	1/8/98 98ZZZX290
PILOT REPORTED SEAT BACK MOVEMENT. FOUND PILOT'S SEAT INBOARD PIVOT ARM UPPER PORTION BROKEN. ONCE PART WAS REMOVED, BROKEN SECTION APPEARED TO HAVE BEEN CRACKED FOR SOME TIME. WITH UPHOLSTERY IN THIS AREA, INSPECTION IS DIFFICULT.									
2612 BUHA	101RA 100220	EMB EMB110P1			1107822117	WIRE TERMINAL 13873	BROKEN LT ENG OUTBOARD	16908	12/16/97 98ZZZX217
WHILE ON SHORT FINAL, LEFT FIRE WARNING ILLUMINATED. MAINTENANCE INSPECTED AND FOUND BROKEN WIRE AT TERMINAL END AT OUTBOARD FORWARD THERMOCOUPLE. REPLACED TERMINAL END SYSTEM. OPS CHECKED OK.									
5620	6KE 766SA	MTSBSI MU2B60				WINDOW 010A31870	CRACKED LT FWD CABIN	5305	1/8/98 98ZZZX238
WHILE CRUSING AT 24,000 FEET, A LOUD POP WAS HEARD AND PRESSURIZATION DROPPED TO 2 PSI. A DESCENT WAS MADE TO A LOWER ALTITUDE AND AN UNEVENTFUL LANDING WAS MADE. UPON INVESTIGATION, THE LEFT FORWARD CABIN WINDOW WAS FOUND CRACKED ACROSS THE BOTTOM. THE AREA OF THE CRACK ALSO HAD SOME CRAZING. THE WINDOW WAS REPLACED WITH A NEW WINDOW AND ALSO ALL OF THE SAME PART NUMBERED WINDWS ON THE LEFT SIDE DUE TO WINDOWS BEING ORIGINAL WITH 5,305.0 FLIGHT HOURS. THE AIRCRAFT IS A 1981 MODEL. SB 087/56-001 REFERENCES ALLOWABLE CRAZING IN THE WINDOWS.									
5711	42752 347450172	PIPER PA34200				FALSE SPAR 6707900	BROKEN WS 69.24		12/17/97 98ZZZX232
THE FALSE SPAR AND WING RIB AT STA 69.24 ON THE LEFT WING WERE FOUND BROKEN AT THE 100-HOUR INSPECTION. SUBMITTER BELIEVES IT WAS CAUSED BY A HARD OR FAST LANDING, ALTHOUGH NONE WERE REPORTED. AD 73-11-02 REFERS TO THIS PROBLEM, HOWEVER, DOES NOT APPLY TO THIS S/N ACFT. PIPER KIT 760-696V IS INSTALLED. REPAIR WILL BE DONE BY INSTALLATION OF NEW RIB AND FAKE SPAR.									

DOMESTIC SERVICE DIFFICULTY REPORT SUMMARY - AIRCRAFT (cont'd)

1/18/98 To 1/24/98 ISSUE: 98-04 ZAC-327

ATA OPER	REG. NO SERIAL NO	ACFT MAKE ACFT MODEL	ENG MAKE ENG MDL	PROP MAKE PROP MDL	COMP MFG COMP MDL	PART NAME PART NUMBER	PART COND PART LOC.	TT TSO	DIFF. DATE OPER CONT NO
5711	42752	PIPER				RIB	BROKEN		12/17/97
	347450172	PA34200				7850002	WS 69.24		98ZZZX231
*****	THE FALSE SPAR AND WING RIB AT STA 69.24 ON THE LEFT WING WERE FOUND BROKEN AT THE 100-HOUR INSPECTION. SUBMITTER BELIEVES IT WAS CAUSED BY A HARD OR FAST LANDING, ALTHOUGH NONE WERE REPORTED. AD 73-11-02 REFERS TO THIS PROBLEM, HOWEVER, DOES NOT APPLY TO THIS S/N ACFT. PIPER KIT 760-696V IS INSTALLED. REPAIR WILL BE DONE BY INSTALLATION OF NEW RIB AND FAKE SPAR.								
3230	811DA	PIPER				RETRACT LINK	CRACKED	4890	12/23/97
JGVR	428001029	PA42				423072	LT MLG		98ZZZX235
*****	DURING ROUTINE INSPECTION, 250-HOUR MAGNAFLUX INSPECTION PERFORMED ON RETRACT ARM LINK. LEFT LINK WAS FOUND CRACKED. TIME SINCE LAST INSPECTION, 107 HOURS. NOTE: PA42 MM CONTAINS NO NDT INSTRUCTIONS OR WHAT TYPE OF NDT TO BE USED DURING THIS INSPECTION. LANDINGS, 5,062.								

(End of DOMESTIC SERVICE DIFFICULTY REPORT SUMMARY - AIRCRAFT)

DOMESTIC SERVICE DIFFICULTY REPORT SUMMARY - HELICOPTERS**1/18/98 - 1/24/98 ISSUE: 98-04 ZAC-327**

ATA OPER	REG. NO SERIAL NO	ACFT MAKE ACFT MODEL	ENG MAKE ENG MDL	PROP MAKE PROP MDL	COMP MFG COMP MDL	PART NAME PART NUMBER	PART COND PART LOC.	TT TSO	DIFF. DATE OPER CONT NO
6210 ALGR	5773X 5004	AEROSP AS355F				BLADE 355A11002006	CRACKED M/R	2150	12/8/97 98ZZZX243
DISCOVERED DURING DAILY INSPECTION, M/R BLADE LOWER SURFACE SKIN CRACKED AT STA 1000 MM LEADING EDGE EROSION STRIPS DEBONDED. REPAIRED BY CTI, RETURNED TO SERVICE.									
6210 ALGR	5773X 5004	AEROSP AS355F				BLADE 355A11002011	DAMAGED M/R	1594	12/9/97 98ZZZX247
DISCOVERED DURING DAILY INSPECTION, FOUND M/R BLADE LEADING EDGE DAMAGED AT STA 3955 MM DUE TO IMPACT OF FOREIGN OBJECT.									
6320 HEEA	9151A 238540	AEROSP SA315B				GEARBOX 319A62000003	CORRODED M/R GRBOX	8427	1/6/98 HEEA0012462
MAIN GRBOX CASE CORROSION.									
2312 HEEA	31077 51520	BELL 206L3				TRANSCIEVER 064105430	FAILED COCKPIT		1/5/98 HEEA0012444
TRANSCIEVER FREQUENCY DISPLAY INOPERATIVE.									
2820 LS1R	9907K 2040	BELL 206B				CARTRIDGE 1C2710	FAILED FUEL PUMP		1/6/98 98ZZZX293
FUEL PUMP DOES NOT PUMP FUEL DUE TO FAILED CARTRIDGE.									
2820 HEEA	2276B 3628	BELL 206B3				CARTRIDGE 2C271	INOPERATIVE FUEL SYS		1/6/98 HEEA0012495
FUEL SYS CARTRIDGE INOPERATIVE.									
3340 HEEA	5019G 45247	BELL 206L1			WHELEN	POWER SUPPLY A490A	FAILED STROBE		1/6/98 HEEA0012487
POWER SUPPLY WILL NOT FLASH THE STROBE BULB.									
3340 HEEA	8588X 51486	BELL 206L3			WHELEN	POWER SUPPLY A413AHDADF1428	FAILED LIGHTS		1/6/98 HEEA0012490
POWER SUPPLY INOPERATIVE.									
3423 HEEA	2251Z 45756	BELL 206L1				COMPASS C2300DL4B	DEFECTIVE COCKPIT		1/6/98 HEEA0012514
COMPASS [24 VOLT] IS OUT OF LIMITS.									
3453 HEEA	3178K 45765	BELL 206L1			ARNAV20	RECEIVER 4530093	FAILED COCKPIT		1/5/98 HEEA0012434
LORAN RECEIVER WILL NOT ACKNOWLEDGE WAYPOINT ALERT.									
3457 HEEA	2761N 45277	BELL 206L1				GPS ANTENNA S67157539	FAILED GPS SYS		1/5/98 HEEA0012436
GPS ANTENNA WILL NOT PICK UP SATELLITES OR FIND ITSELF.									
5510 HEEA	205FC 51130	BELL 206L3				STABILIZER ASSY 206023119151A	DEFECTIVE GUIDE PINS		1/6/98 HEEA0012496
STAB ASSY GUIDE PINS STUCK. SEPARATED ON FRONT EDGE.									

***** DENOTES SIGNIFICANT OCCURRENCE

DOMESTIC SERVICE DIFFICULTY REPORT SUMMARY - HELICOPTERS (cont'd)

1/18/98 To 1/24/98 ISSUE: 98-04 ZAC-327

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6210 ALGR	27545 45234	BELL 206L1				BLADE 206015001107	CRACKED M/R	1370	12/3/97 98ZZZX253
DISCOVERED DURING DAILY INSPECTION, M/R BLADE SPAR CRACKED AT TIP.									
6210 ALGR	206SL 45245	BELL 206L1				BLADE 206015001107	CORRODED M/R	2975	12/3/97 98ZZZX252
DISCOVERED DURING DAILY INSPECTION, M/R BLADE HAD CORROSION AND SKIN DEBOND AT BLADE TIP.									
6210 ALGR	1068S 45436	BELL 206L1				BLADE 206015001107	DELAMINATED M/R	2517	12/4/97 98ZZZX250
DISCOVERED DURING DAILY INSPECTION, M/R BLADE SKIN DELAMINATED OVER SPAR AT TIP AND CORROSION OF TIP.									
6210 ALGR	3890B 45480	BELL 206L1				BLADE 206015001107	CORRODED M/R	2890	12/3/97 98ZZZX257
DISCOVERED DURING DAILY INSPECTION, SKIN CORROSION AND SEPARATION AT TIP.									
6210 ALGR	3890B 45480	BELL 206L1				BLADE 206015001107	CORRODED M/R	2758	12/3/97 98ZZZX258
DISCOVERED DURING DAILY INSPECTION, M/R BLADE SKIN SEPARATED AND CORRODED AT TIP.									
6210 ALGR	3890B 45480	BELL 206L1				BLADE 206015001107	CORRODED M/R	2951	12/3/97 98ZZZX259
DISCOVERED DURING DAILY INSPECTION, M/R BLADE SKIN SEPARATED AND CORRODED AT TIP.									
6210 ALGR	365AL 51376	BELL 206L3				BLADE 206015001107	CRACKED M/R	2445	12/3/97 98ZZZX256
DISCOVERED DURING DAILY INSPECTION, M/R BLADE SPAR CRACKED AT TIP.									
6210 ALGR	362AL 51471	BELL 206L3				BLADE 206015001107	CORRODED M/R	1421	12/3/97 98ZZZX254
DISCOVERED DURING DAILY INPSECTION, M/R BLADE SKIN CORRODED AND SEPARATED AT TIP AND RAILING EDGE EXTRUSION CORRODED.									
6230 ZV1R	2621 45400	BELL 206L1				DRIVE LINK 206010336005	WORN M/R MAST		11/14/97 98ZZZX302
EXCESSIVE PLAY AT TWO PLACES. SEE BELL MM L-3, FIG 62-21. ON TEAR-DOWN, FOUND BEARINGS AND SPACERS WORN BEYOND LIMITS. TOTAL TIMES OF PARTS LESS THAN 1,000 HOURS/1 YEAR SINCE REPLACEMENT.									
6230 ZV1R	2611 45417	BELL 206L1				DRIVE LINK 206010336005	WORN M/R MAST		11/12/97 98ZZZX298
EXCESSIVE PLAY AT TWO PLACES. SEE BELL MM L-3 FIG 62-21. ON TEAR-DOWN, FOUND BEARINGS AND SPACERS WORN BEYOND LIMITS. TOTAL TIME OF PARTS LESS THAN 1,000 HOURS/1 YEAR SINCE REPLACEMENT.									
6230 ZV1R	3899C 45596	BELL 206L1				DRIVE LINK 206010336005	WORN M/R MAST		11/14/97 98ZZZX301
EXCESSIVE PLAY AT TWO PLACES. SEE BELL MM L-3, FIG 62-21. ON TEAR-DOWN, FOUND BEARINGS AND SPACERS WORN BEYOND LIMITS. TOTAL TIMES OF PARTS LESS THAN 1,000 HOURS/1 YEAR SINCE REPLACEMENT.									

***** DENOTES SIGNIFICANT OCCURRENCE

DOMESTIC SERVICE DIFFICULTY REPORT SUMMARY - HELICOPTERS (cont'd)

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6230 ZV1R	2619 51375	BELL 206L3				DRIVE LINK 206010336005	WORN M/R MAST		11/12/97 98ZZZX300
EXCESSIVE PLAY AT TWO PLACES. SEE BELL MM L-3, FIG 62-21. ON TEAR-DOWN, FOUND BEARINGS AND SPACERS WORN BEYOND LIMITS. TOTAL TIMES OF PARTS LESS THAN 1,000 HOURS/1 YEAR SINCE REPLACEMENT.									
6230 ZV1R	2616 51418	BELL 206L3				DRIVE SHAFT 206010336005	WORN M/R MAST		11/12/97 98ZZZX299
EXCESSIVE PLAY AT TWO PLACES. SEE BELL MM L-3, FIG 62-21. ON TEAR-DOWN, FOUND BEARINGS AND SPACERS WORN BEYOND LIMITS. TOTAL TIMES OF PARTS LESS THAN 1,000 HOURS/1 YEAR SINCE REPLACEMENT.									
6240 HEEA	11027 45411	BELL 206L1				INDICATOR 206075681117	FAILED DUAL TACH		1/6/98 HEEA0012461
DUAL TACH ROTOR NEEDLE NOT WORKING.									
6240 HEEA	81SP 51029	BELL 206L3				INDICATOR 206075681105	STICKS DUAL TACH		1/6/98 HEEA0012459
DUAL TACH NEEDLE STICKS UP TO 30%.									
6330 HEEA	5006F 45181	BELL 206L1				STOP ASSY 206033518007	WORN TRANSMISSION		1/6/98 HEEA0012503
TRANSMISSION STOP ASSY HAS WORN RUBBER.									
6330 HEEA	10761 45381	BELL 206L1				LINK ASSY 206033554101	WORN TRANSMISSION		1/6/98 HEEA0012502
TRANSMISSION LINK ASSY WORN.									
6330 HEEA	10814 45415	BELL 206L1				RESTRAINT 206033506101	WORN TRANSMISSION		1/6/98 HEEA0012498
TRANSMISSION RESTRAINT BEARINGS WORN.									
6330 HEEA	2133X 45634	BELL 206L1				RESTRAINT 206033506101	WORN TRANSMISSION		1/6/98 HEEA0012491
TRANSMISSION RESTRAINT HAS WORN BEARINGS.									
6330 HEEA	3178K 45765	BELL 206L1				RESTRAINT 206033506103	WORN TRANSMISSION		1/6/98 HEEA0012464
TRANSMISSION RESTRAINT HAS WORN BEARINGS.									
6330 HEEA	141BH 51303	BELL 206L3				RESTRAINT 206033506103	WORN TRANSMISSION		1/6/98 HEEA0012465
TRANSMISSION RESTRAINT HAS WORN BEARINGS.									
6330 HEEA	6251V 51404	BELL 206L3				RESTRAINT 206033506103	WORN TRANSMISSION		1/6/98 HEEA0012505
TRANSMISSION RESTRAINT HAS BEARINGS WORN.									
6710 LS1R	9907K 2040	BELL 206B				ACTUATOR 20606272111	INOPERATIVE ENG DROOP COMP		1/6/98 98ZZZX295
INTERNAL MOTOR SHUT-OFF INOPERABLE.									

***** DENOTES SIGNIFICANT OCCURRENCE

DOMESTIC SERVICE DIFFICULTY REPORT SUMMARY - HELICOPTERS (cont'd)

1/18/98 To 1/24/98 ISSUE: 98-04 ZAC-327

ATA OPER	REG. NO SERIAL NO	ACFT MAKE ACFT MODEL	ENG MAKE ENG MDL	PROP MAKE PROP MDL	COMP MFG COMP MDL	PART NAME PART NUMBER	PART COND PART LOC.	TT TSO	DIFF. DATE OPER CONT NO
6710 GJQR	86W 4142	BELL 206B3				ACTUATOR 206062721113	CORRODED DROOP COMP	302	1/15/98 HAIGJQR0163
CORROSION - THE FAILURE RATE FOR THESE ACTUATORS, ALL P/N'S, ARE EXCESSIVE. THE COMMON DISCREPANCY REPORT FROM THE OVERHAUL SHOP SUGGESTS THAT THE COMPONENT IS NOT ADEQUATELY SEALED. BEARINGS BAD, GREASE CONTAMINATED, ARMATURE CORRODED, ETC. REPLACED WITH O/H'D UNIT FROM OUR OWN STOCK.									
6720 ZV1R		BELL 206L1				BELLCRANK 2060017631	MISMANUFACTURED ANTI TORQUE		12/17/97 98ZZZX289
*****	DURING REPLACEMENT OF COMPONENTS FOUND COULD NOT RIG TAIL ROTOR FOR FULL PEDAL MOVEMENT. TROUBLESHOOTING FOUND THAT BELLCRANK P/N 206-001-763-1 AND ROD ASSY P/N 206-011-751-101 WERE CONTACTING. FOUND THAT BELLCRANK DID NOT HAVE THE PROPER DEPTH GROOVE MACHINED IN IT. FOUND 2 OTHER BELLCRANKS IN STOCK WITH SAME PROBLEM. BELL WAS CONTACTED.								
7714 LS1R	9907K 2040	BELL 206B				INDICATOR 206075682001	FAILED N1 TACHOMETER		1/6/98 98ZZZX294
NO INDICATION ON N1 TACHOMETER GAUGE.									
7714 HEEA	8592X 51508	BELL 206L3				GAGE 206075682107	FAILED GAS PROD IND		1/6/98 HEEA0012458
GAS PRODUCER INDICATOR NEEDLES OSCILLATES DURING STARTING CYCLE.									
7714 HEEA	31073 51519	BELL 206L3				GAGE 206075682107	ERRATIC GAS PRODUCER		1/6/98 HEEA0012492
GAS PRODUCER NEEDLE HAS ERRATIC OPERATION.									
7722 HEEA	20898 45721	BELL 206L1				INDICATOR 206375007103	FAILED ENG TOT		1/6/98 HEEA0012474
TOT INDICAOR INCORRECT READING.									
7930 HEEA	2145C 3456	BELL 206B3			174000103	INDICATOR 174035201	FAILED ENG OIL		1/5/98 HEEA0012439
INDICATOR WAS REMOVED FROM BOWL AND CLEANED. INSTALLED INDICATOR BACK ON BOWL, TESTED AND INDICATOR STILL DIDN'T WORK.									
7930 HEEA	5019G 45247	BELL 206L1			174000103	INDICATOR 174035201	FAILED ENG OIL		1/5/98 HEEA0012438
INDICATOR WAS REMOVED FROM BOWL AND CLEANED. INSTALLED INDICATOR BACK ON BOWL, TESTED AND INDICATOR STILL DIDN'T WORK.									
7930 HEEA	2770Y 45291	BELL 206L1			174000103	INDICATOR 174035201	FAILED ENG OIL		1/5/98 HEEA0012440
INDICATOR WAS REMOVED FROM BOWL AND CLEANED. INSTALLED INDICATOR BACK ON BOWL, TESTED AND INDICATOR STILL DIDN'T WORK.									
7930 HEEA	10814 45415	BELL 206L1			174000103	INDICATOR 174035201	FAILED ENG OIL		1/5/98 HEEA0012441
INDICATOR WAS REMOVED FROM BOWL AND CLEANED. INSTALLED INDICATOR BACK ON BOWL, TESTED AND INDICATOR STILL DIDN'T WORK									
7930 HEEA	22425 45743	BELL 206L1			174000103	INDICATOR 174035201	FAILED ENG OIL	31	1/5/98 HEEA0012437
INDICATOR WAS REMOVED FROM BOWL AND CLEANED. INSTALLED INDICATOR BACK ON BOWL, TESTED AND INDICATOR STILL DIDN'T WORK.									
7930 HEEA	8591X 51495	BELL 206L3			174000103	INDICATOR 174035201	FAILED ENG OIL		1/5/98 HEEA0012443
INDICATOR WAS REMOVED FROM BOWL AND CLEANED. INSTALLED INDICATOR BACK ON BOWL, TESTED AND INDICATOR STILL DIDN'T WORK.									

***** DENOTES SIGNIFICANT OCCURRENCE

DOMESTIC SERVICE DIFFICULTY REPORT SUMMARY - HELICOPTERS (cont'd)

1/18/98 To 1/24/98 ISSUE: 98-04 ZAC-327

ATA OPER	REG. NO SERIAL NO	ACFT MAKE ACFT MODEL	ENG MAKE ENG MDL	PROP MAKE PROP MDL	COMP MFG COMP MDL	PART NAME PART NUMBER	PART COND PART LOC.	TT TSO	DIFF. DATE OPER CONT NO
7930 HEEA	6160Y 51609	BELL 206L3			174000103	INDICATOR 174035201	FAILED ENG OIL		1/5/98 HEEA0012442
INDICATOR WAS REMOVED FROM BOWL AND CLEANED. INSTALLED INDICATOR BACK ON BOWL, TESTED AND INDICATOR STILL DIDN'T WORK.									
2370 HEEA	5736D 31135	BELL 212				CVR 9806019001	FAILED COCKPIT	2816	1/6/98 HEEA0012454
CVR FAILED TEST.									
2562 HEEA	1079U 31122	BELL 212				EPIRB ACRRLB21	DEFECTIVE ANTENNA		1/6/98 HEEA0012485
EPIRB ANTENNA BROKEN AND BODY CRACKS IN BOTTOM.									
3040 GJQR	98W 35100	BELL 212				CONVERTER 204070907001	FAILED WIPER MOTOR	491	1/7/98 HAIGJQR0160
WIPER CONVERTER UNIT IS INOP. REPLACED WITH NEW PART FROM BHT									
3442 HEEA	102PH 30899	BELL 212			P4001	INDICATOR MI5852013	FAILED COCKPIT		1/5/98 HEEA0012435
RADAR SYSTEM WOULD COME ON, BUT SCREEN WAS BLANK. AFTER AWHILE, SYSTEM WOULD SHUTDOWN.									
6700 GJQR	98W 35100	BELL 212				TUBE 209011710005	SCORED CONTROL	419	1/7/98 HAIGJQR0162
SHAFT HAS HEAVY SCORING WHICH ALLOWS OIL TO SEEP BY. REPLACED WITH TUBE REMOVED FROM A/C AND SENT IN FOR LOCAL REPAIR -									
7810 GJQR	98W 35100	BELL 212				DUCT ASSY 212061202009	DEFECTIVE LT EXHAUST	538	1/7/98 HAIGJQR0159
TO C/W TB212-97-163. REPLACED WITH NEW PART FROM BHT - O/H'D NOT AVAILABLE. COULD NOT INSTALL WITHIN 30 DAYS, HAD TO GROUND SHIP TO INSTALL AND COULD NOT GROUND UNTIL DEC. 97.									
2210 HEEA	3897N 28106	BELL 214ST				AMPLIFIER ASSY 214074305105	FAILED FBW ELEV		1/6/98 HEEA0012473
AMPLIFIER ASSY TRIPS OFF IN FLIGHT.									
2210 HEEA	6957Y 28139	BELL 214ST				AMPLIFIER ASSY 214074303115	FAILED AUTO FLIGHT		1/6/98 HEEA0012471
AMPLIFIER ASSY FAULTY. PITCH CHANNEL WOULD NOT STAY ON LINE.									
2436 HEEA	745H 28200	BELL 214ST				REGULATOR 214175153105	INOPERATIVE DC SYS		1/5/98 HEEA0012451
VOLTAGE REGULATOR INOPERATIVE.									
2913 HEEA	3897N 28106	BELL 214ST				PUMP 214076033101	LEAKING HYD SYS		1/6/98 HEEA0012455
HYD PUMP LEAKING AT OUTLET FITTING.									
2932 HEEA	3897N 28106	BELL 214ST				SWITCH 205076044007	FAILED HYD PRESS		1/6/98 HEEA0012493
PRESSURE LIGHT STAYS ON.									

***** DENOTES SIGNIFICANT OCCURRENCE

DOMESTIC SERVICE DIFFICULTY REPORT SUMMARY - HELICOPTERS (cont'd)

1/18/98 To 1/24/98 ISSUE: 98-04 ZAC-327

ATA OPER	REG. NO SERIAL NO	ACFT MAKE ACFT MODEL	ENG MAKE ENG MDL	PROP MAKE PROP MDL	COMP MFG COMP MDL	PART NAME PART NUMBER	PART COND PART LOC.	TT TSO	DIFF. DATE OPER CONT NO
3417 HEEA	6957Y 28139	BELL 214ST				AIR DTA COMPUTER 214175421101	FAILED NR 2 ENG PWR		1/6/98 HEEA0012468
ADC DOESN'T SHOW NR2 ENGINE POWER CHECK.									
5610 HEEA	8045T 28101	BELL 214ST				WINDOW 214031803103	FAILED COPILOT UPPER		11/6/97 98ZZZX292
***** INBOUND TO SHORE BASE, COPILOT'S UPPER 'GREENHOUSE' WINDOW BROKE AND A PORTION OF IT DEPARTED AIRCRAFT. NO PREVIOUS DEFECTS OR REPAIRS PRIOR TO INCIDENT. MAINTENANCE REPLACED WINDOW ASSEMBLY. REF: 214ST IPC, CHAPTER 52-99-00, FIGURE 52-2, ITEM NR 9.									
7320 HEEA	5748M 28102	BELL 214ST				HMU 6038T62P24	FAILED NR 1 ENGINE		1/6/98 HEEA0012452
NR1 ENGINE FAILED IN FLIGHT.									
2312 TI1R	911MK 47515	BELL 222			RT138	TRANSCIVER 4000102000	FAILED COCKPIT		11/5/97 98ZZZX281
UPON INITIAL TRANSCIVER INSTALLATION, CIRCUIT BREAKER TRIPS WHEN TRANSMITTER BUTTON IS KEYED. REMOVED AND REPLACED.									
7120 TI1R	222HX 47533	BELL 222U				MOUNT 222060150001	DEFECTIVE BEARING	284	11/25/97 98ZZZX284
ENGINE MOUNT BEARING NOT PROPERLY STAKED. REMOVED AND REPLACED.									
2430 TI1R	4UV 23019	BELL 230				SHUNT 1820300150	WORN DC SYSTEM	286	11/12/97 98ZZZX279
SHUNT WORN AND DISCOLORED. REMOVED AND REPLACED 4 EACH.									
6330 TI1R	4UV 23019	BELL 230				MOUNT 222331617101	WORN TRANSMISSION		11/7/97 98ZZZX280
ISOLATION MOUNT HAS WORN BEARING. REMOVED AND REPLACED.									
6330 TI1R	4UV 23019	BELL 230				BEARING 222330620103	WORN XMSN MOUNT		11/7/97 98ZZZX278
MOUNT BEARING WORN. REMOVED AND REPLACED.									
6720 TI1R	4UV 23019	BELL 230				PITCH LINK 230312001101	WORN TAIL ROTOR		11/4/97 98ZZZX277
PITCH LINK WORN OUT OF LIMITS. REMOVED AND REPLACED 2 EACH.									
6322 ALGR	417AL 53054	BELL 407				BLOWER HOUSING 206061432116	CRACKED OIL COOLER	1442	11/18/97 98ZZZX263
BLOWER REMOVED BECAUSE OF ROUGH BEARINGS. HOUSING ALSO CRACKED. SHEET METAL HOUSING CRACKED AT RIVETED EDGE WHERE HOUSING ATTACHES TO 407-062-021-101 OIL COOLER DUCT ASSEMBLY. SUBMITTER SUGGESTED THAT POSSIBLY A POOR FIT PUTTING STRAIN ON SHEET METAL WHEN ATTACHED TO DUCT.									
6322 ALGR	427AL 53107	BELL 407			407040303101	BEARING 406040339105	ROUGH NR 2 T/R DRIVE	1032	11/11/97 98ZZZX305
TWENTY-FIVE HOUR INSPECTION FOUND OIL COOLER BLOWER BEARINGS ROUGH. ALSO, SHAFT SPLINES SHOW SIGNS OF LACK OF LUBRICATION. SUBMITTER RECOMMENDED IMPROVING BEARING AND LUBRICATION ON SHAFT TO COUPLING SPLINES.									

***** DENOTES SIGNIFICANT OCCURRENCE

DOMESTIC SERVICE DIFFICULTY REPORT SUMMARY - HELICOPTERS (cont'd)

1/18/98 To 1/24/98 ISSUE: 98-04 ZAC-327

ATA OPER	REG. NO SERIAL NO	ACFT MAKE ACFT MODEL	ENG MAKE ENG MDL	PROP MAKE PROP MDL	COMP MFG COMP MDL	PART NAME PART NUMBER	PART COND PART LOC.	TT TSO	DIFF. DATE OPER CONT NO
6322	427AL	BELL				BEARING	ROUGH	1032	11/11/97
ALGR	53107	407			407040303101	406040339105	NR 2 T/R DRIVE		98ZZZX306
TWENTY-FIVE HOUR INSPECTION FOUND OIL COOLER BLOWER BEARINGS ROUGH. ALSO, SHAFT SPLINES SHOW SIGNS OF LACK OF LUBRICATION. SUBMITTER RECOMMENDED IMPROVING BEARING AND LUBRICATION ON SHAFT TO COUPLING SPLINES.									
6410	407AL	BELL				BLADE	CRACKED	42	11/21/97
ALGR	53044	407			407012101105	406016100119	T/R		98ZZZX240
DAILY INSPECTION FOUND CRACK AT ROOT END OF T/R BLADE ON THE INSIDE OF THE LEADING EDGE. SUSPECT CAUSE IS HIGH STRESS AREA. PART IS UNSERVICEABLE. INSTALLED BEEF-UP STRESS BLOCK IN LEADING EDGE AT ROOT END OF BLADE.									
6510	407AL	BELL				BEARING	WORN	1569	12/9/97
ALGR	53044	407				406040322101	T/R DRIVE HANGER		98ZZZX261
SCHEDULED MAINTENANCE FOUND TAIL ROTOR DRIVESHAFT NR 2 HANGER BEARING ROUGH AND WORN, AXIAL PLAY.									
6510	407AL	BELL				BOLT	WORN	1569	12/9/97
ALGR	53044	407				NAS6604D50	T/R DRV SUPPORT		98ZZZX260
SCHEDULED MAINTENANCE FOUND TAIL ROTOR DRIVESHAFT NR 2 BOLT WORN OR STEPPED, FRETTING.									
6510	407AL	BELL				DISC PACK	CRACKED		11/9/97
ALGR	53044	407			407040302101	406040340101	T/R DRIVE		98ZZZX303
WHILE C/W AD 97-22-15, FOUND T/R DRIVE DISC PACK CRACKED BETWEEN NR 6 AND NR 7. SUBMITTER RECOMMENDS FLOATING DRIVESHAFTS SIMILAR TO THE BELL 206 SERIES.									
6510	407AL	BELL				DISK PACK	CRACKED		11/27/97
ALGR	53044	407				406040340101	T/R DRIVE		98ZZZX264
IN C/W AD 97-24-17 DURING PHASE 6, FOUND ONE CRACKED LAMINATE OF TAIL ROTOR DRIVESHAFT DISK PACK AT NR 7 HYDRAULIC FORWARD LAMINATE.									
6510	407AL	BELL				BRACKET	WORN	1569	12/9/97
ALGR	53044	407				407040321101	T/R DRIVESHAFT		98ZZZX262
SCHEDULED MAINTENANCE FOUND NR 2 TAIL ROTOR DRIVESHAFT FORWARD BRACKET UPPER BOLT HOLE WORN ELLIPTICAL.									
6510	417AL	BELL				DISC PACK	CRACKED		11/9/97
ALGR	53054	407			407040302101	406040340101	T/R DRIVE		98ZZZX304
C/W OF AD 97-22-15, FOUND T/R DRIVE COUPLING DISC PACK AFT LAMINATE 'ONE' CRACKED BETWEEN NR 6 AND NR 7. SUBMITTER RECOMMENDS FLOATING DRIVESHAFTS SIMILAR TO THE BELL 206 SERIES.									
6510	437AL	BELL				DISK PACK	CRACKED		12/22/97
ALGR	53141	407				406040340101	T/R SHAFT		98ZZZX244
DISCOVERED DURING 25 HOUR INSPECTION, T/R DRIVE SHAFT NR 5 DISK PACK CRACKED ON AFT SIDE IN 2 PLACES.									
6510	437AL	BELL				DISC PACK	CRACKED		11/10/97
ALGR	53141	407				406040340101	T/R DRIVE		98ZZZX310
AD 97-22-15, 25-HOUR TAIL BOOM INSPECTION FOUND CRACKED DISCS NR 2 TO NR 3, NR 1 DISC IN PACK CRACKED, NR 5 TO NR 6 LOCATION NR 10 DISC IN PACK CRACKED. SUBMITTER RECOMMENDED FLOATING DRIVESHAFTS SIMILAR TO THE BELL 206 SERIES.									
6510	437AL	BELL				DISK PACK	CRACKED		11/21/97
ALGR	53141	407			407040302101	406040340101	NR 5		98ZZZX248
FOUND DURING 25 HOUR AD INSPECTION, T/R DRIVESHAFT DISK PACK NR 5 HAS CRACKED COUPLING. CRACKED ON AFT SIDE OF COUPLING. PACK CONSISTS OF 1 DISK.									

***** DENOTES SIGNIFICANT OCCURRENCE

DOMESTIC SERVICE DIFFICULTY REPORT SUMMARY - HELICOPTERS (cont'd)

1/18/98 To 1/24/98 ISSUE: 98-04 ZAC-327

ATA OPER	REG. NO SERIAL NO	ACFT MAKE ACFT MODEL	ENG MAKE ENG MDL	PROP MAKE PROP MDL	COMP MFG COMP MDL	PART NAME PART NUMBER	PART COND PART LOC.	TT TSO	DIFF. DATE OPER CONT NO
6710 HEEA	406PH 53198	BELL 407				SWITCH 407076502119	MISRIGGED CYCLIC CENTER	42	11/20/97 98ZZZX296
PILOT REPORTED AT 1320, UNABLE TO MOVE CYCLIC STICK AFT AFTER TAKEOFF FROM PLATFORM. PILOT EXERTED APPROXIMATELY 40 POUNDS PRESSURE, CYCLIC FREED UP. LANDED ON WC-522. AFTER LANDING, CYCLIC AGAIN COULD NOT BE MOVED AFT. FOUND CYCLIC CENTERING SWITCH CONTACTING TARGET PLATE. RE-RIGGED PER MM SPECS TO 030 INCH - 070 INCH. NOTE: LEAD SEAL APPLIED BY MANUFACTURER STILL INTACT PRIOR TO ADJUSTMENT. REF: BHT 407 MM CHAPTER 67-00-00, FIG 67-11, PAGE 45, IPB CHAPTER 96-99-00, PAGE 40, ITEM NR 31.									
7320 HEEA	417PH 53038	BELL 407				HMU 23068651	FAILED ENGINE	578	1/5/98 HEEA0012446
FADEC DEGRADE AND RESTART FAULT LIGHT ON IN FLIGHT. REPLACEMENT S/N ALM0437.									
2562 HEEA	293CA	BELL 412				ELT 3000	FAILED COCKPIT		1/6/98 HEEA0012482
ELT OUTPUT DISTORTED.									
2820 HEEA	1202T 33112	BELL 412				CHECK VALVE 214066226103	LEAKS FUEL SYS		1/6/98 HEEA0012516
CHECK VALVE LEAKS THROUGH WIRES.									
3150 HEEA	33008 36004	BELL 412				PANEL 214175122111	FAILED MASTER CAUTION		1/6/98 HEEA0012460
DOESN'T TURN ON MASTER CAUTION LIGHT.									
3413 HEEA	22608 33075	BELL 412				INDICATOR 212070239001	DEFECTIVE COCKPIT		1/15/98 HEEA0012584
RATE OF CLIMB INDICATOR. INSPECT FOR POSSIBLE WATER DAMAGE. COMPLY WITH ASB 214ST-97-79, PART 2.									
3424 HEEA	3893N 33010	BELL 412				RATE GYRO 214075244001	FAILED COCKPIT		1/6/98 HEEA0012515
RATE GYRO INOPERATIVE. WILL NOT PULL RT FLAG ON HSI AND WILL NOT SHOW DEFLECTION IN TURN.									
3425 HEEA	3893N 33010	BELL 412				INDICATOR 1113025	FAILED HSI COURSE		1/6/98 HEEA0012469
HSI COURSE WINDOW NUMBERS JAMMED.									
3457 HEEA	2148K 36001	BELL 412			GARMIN INTL	GPS165 0110010600	FAILED COCKPIT		1/5/98 HEEA0012433
GPS 165 UNIT MESSAGE: INTERNAL BATTERY LOW.									
5260 HEEA	3893S 33022	BELL 412				ACTUATOR 212075418105	INOPERATIVE STEP	11	1/6/98 HEEA0012501
STEP ACTUATOR INOPERATIVE.									
6210 HEEA	293CA	BELL 412				BLADE 412015300109	SEPARATION M/R	576	1/5/98 HEEA0012432
M/R BLADE HAS SEPARATION ON THE TRAILING EDGE DOUBLER WHICH IS BEYOND THE LIMITS.									
6210 HEEA	293CA	BELL 412				BLADE 412015300109	UNBONDED M/R	6908	1/5/98 HEEA0012431
M/R BLADE HAS BOTH UPPER FRETTING PADS UNBONDED.									

***** DENOTES SIGNIFICANT OCCURRENCE

DOMESTIC SERVICE DIFFICULTY REPORT SUMMARY - HELICOPTERS (cont'd)

1/18/98 To 1/24/98 ISSUE: 98-04 ZAC-327

ATA OPER	REG. NO SERIAL NO	ACFT MAKE ACFT MODEL	ENG MAKE ENG MDL	PROP MAKE PROP MDL	COMP MFG COMP MDL	PART NAME PART NUMBER	PART COND PART LOC.	TT TSO	DIFF. DATE OPER CONT NO
6210 HEEA	2258F 33073	BELL 412				BLADE 412015300109	DEFECTIVE M/R	9901	1/5/98 HEEA0012430
BLADE RECEIVED FROM VENDOR WITH NO WEIGHTS IN FORWARD ROOT POCKET; BLADE IS HEAVY AND CANNOT BALANCE									
6220 HEEA	2298Z 33077	BELL 412				CAP ASSY 412030437103	WORN M/R AFT		1/6/98 HEEA0012486
AFT CAP ASSY HAS WORN RUBBER.									
6320 HEEA	2148K 36001	BELL 412				GEAR ASSY 212040149001	WORN TRANSMISSION		1/6/98 HEEA0012504
GEAR ASSY HAS WORN SEAL RIDE.									
6320 HEEA	2148K 36001	BELL 412				CASE ASSY 204040386001	CORRODED M/R XMSN		1/6/98 HEEA0012497
CASE ASSY HAS CORROSION PITS ON LOWER FLANGE AND PILOT DATA SURFACES.									
6320 HEEA	2148K 36001	BELL 412				ADAPTER 212040190101	CORRODED SEAL RIDE		1/6/98 HEEA0012499
ADAPTER HAS CORROSION AT SEAL RIDE.									
6321 HEEA	107X 33113	BELL 412				PANEL 214175122111	MALFUNCTION BRAKE WARN		1/6/98 HEEA0012472
PILOT SIDE ROTOR BRAKE, LIGHT STAYS ON DIM.									
6720 HEEA	5759N 33002	BELL 412				YAW CONTROL 7001484	FAILED T/R CONTROL		1/6/98 HEEA0012463
YAW CONTROL SHOWS FULL RIGHT DEFLECTION.									
7210 HEEA	6559Z 36019	BELL 412				COMBINING GRBOX 3024780	MAKING METAL ENGINE	14154	1/6/98 HEEA0012456
COMBINING GEARBOX HAS METAL ON PLUG AND FILTER.									
7250 HEEA	107X 33113	BELL 412				CASE 3017600	CRACKED ENGINE	11668	1/6/98 HEEA0012457
ENGINE HAS CRACK IN GENERATOR CASE.									
7314 HEEA	107X 33113	BELL 412	PWA PT6T3B			FUEL PUMP 02527730006	FAILED NR 1 ENGINE	8164 4191	9/30/97 98ZZZX291
ON OUTBOUND FLIGHT, NR 1 ENGINE FLAMED OUT. RETURNED TO SHORE BASE AND MADE UNEVENTFUL SINGLE ENGINE LANDING. MAINTENANCE INVESTIGATION REVEALED INTERNAL SPLINE FAILURE OF PUMP AND COUPLING DRIVE. REF: P & W IPC, CHAPTER 72-00-11, FIGURE 1, ITEM 10.									
7712 HEEA	108X 33115	BELL 412				INDICATOR 412075008111	STICKS NR 1 ENG TORQUE		1/6/98 HEEA0012506
NR1 ENGINE TORQUE NEEDLE STICKS AND IS ERRATIC.									
7714 HEEA	3893S 33022	BELL 412				INDICATOR 412075010109	INOPERATIVE TRIPLE TACH		1/6/98 HEEA0012466
NR1 TRIPLE TACH INDICATOR NEEDLE INOPERATIVE.									

***** DENOTES SIGNIFICANT OCCURRENCE

DOMESTIC SERVICE DIFFICULTY REPORT SUMMARY - HELICOPTERS (cont'd)

1/18/98 To 1/24/98 ISSUE: 98-04 ZAC-327

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2422 HEEA	86CH S557	BOLKMS BO105S				INVERTER 2A10001G	FAILED AC SYS		1/6/98 HEEA0012510
INVERTER FAILED. NO POWER TO 110 VAC.									
2430 ALGA	491HL S664	BOLKMS BO105S				CABLE	SHORTED BATTERY		11/14/97 98ZZZX309
WHILE AIRCRAFT WAS RUNNING, THE ODOR OF BURNED WIRE INSULATION WAS NOTICED AND NR 1 GENERATOR LIGHT ILLUMINATED AND THEN EXTINGUISHED. AIRCRAFT WAS SHUT DOWN. THE BATTERY WAS DISCONNECTED. UPON INSPECTION, FOUND THE CABLE FROM THE BATTERY RELAY TO THE RCCR HAD SHORTED TO GROUND.									
2822 HEEA	967MB S737	BOLKMS BO105S			D107318D1	ROTOR D10731814	FAILED BOOST PUMP	682	1/5/98 HEEA0012425
BOOST PUMP WAS REMOVED FOR BEING INOPERATIVE. ARMATURE SHORTED. DISASSEMBLED AND FOUND THAT BEARING CAME APART AND CAUSED ARMATURE TO BURN UP. SENT TO MIR BEARING WAS RECEIVED IN BEARING KIT P/N D107318-21.									
2840 HEEA	911EB S812	BOLKMS BO105S				TRANSDUCER BSE206150G3	FAILED FUEL PRESS		1/6/98 HEEA0012512
TRANSDUCER READS HIGH OUT OF TOLERANCE AT 95 PSI.									
3340 HEEA	86CH S557	BOLKMS BO105S			WHELEN	POWER SUPPLY A413AHDACF1428	FAILED LIGHTS		1/6/98 HEEA0012488
POWER SUPPLY INOPERATIVE LIGHTS ARE OUT.									
3340 HEEA	86CH S557	BOLKMS BO105S			WHELEN	POWER SUPPLY A413AHDACF1428	FAILED LIGHTS		1/6/98 HEEA0012489
POWER SUPPLY INOPERATIVE. NO OUTLET WORKS, SMALL RATTLE INSIDE.									
3610 HEEA	6607K S841	BOLKMS BO105S				VALVE 97914211	FAILED BLEED SOV		1/6/98 HEEA0012481
BLEED SOV WOULD NOT OPEN. INOPERATIVE.									
6240 HEEA	205UC S668	BOLKMS BO105S				INDICATOR 10594564	FAILED MAST MOMENT		1/6/98 HEEA0012475
MAST MOMENT INDICATOR PEGS OUT IN FLIGHT.									
6240 HEEA	205UC S668	BOLKMS BO105S				TRANSMITTER 10594575	FAILED MAST MOMENT		1/6/98 HEEA0012476
MAST MOMENT TORQUE TRANSMITTER PEGS OUT IN FLIGHT.									
6240 HEEA	5029H S670	BOLKMS BO105S				INDICATOR 10594564	FAILED MAST MOMENT		1/6/98 HEEA0012508
MAST MOMENT INDICATOR INDICATES HIGH, DOES NOT INDICATE CORRECTLY.									
6240 HEEA	5029H S670	BOLKMS BO105S				TRANSMITTER 10594575	FAILED ROTOR MAST		1/6/98 HEEA0012507
TORQUE TRANSMITTER INDICATES HIGH, DOES NOT INDICATE CORRECTLY.									
6240 HEEA	5029H S670	BOLKMS BO105S				TRANSMITTER 10594575	FAILED ROTOR TORQUE		1/6/98 HEEA0012509
TORQUE TRANSMITTER INDICATES HIGH, DOES NOT INDICATE CORRECTLY.									

***** DENOTES SIGNIFICANT OCCURRENCE

DOMESTIC SERVICE DIFFICULTY REPORT SUMMARY - HELICOPTERS (cont'd)

1/18/98 To 1/24/98 ISSUE: 98-04 ZAC-327

ATA OPER	REG. NO SERIAL NO	ACFT MAKE ACFT MODEL	ENG MAKE ENG MDL	PROP MAKE PROP MDL	COMP MFG COMP MDL	PART NAME PART NUMBER	PART COND PART LOC.	TT TSO	DIFF. DATE OPER CONT NO
6240 HEEA	81982 S818	BOLKMS BO105S				TRANSMITTER 10594575	FAILED MAST MOMENT		1/6/98 HEEA0012477
TORQUE TRANSMITTER INOPERATIVE IN TEST MODE.									
6240 HEEA	81982 S818	BOLKMS BO105S				INDICATOR 10594564	FAILED MAST MOMENT		1/6/98 HEEA0012478
MAST MOMENT INDICATOR INOPERATIVE IN TEST MODE.									
6240 HEEA	6607K S841	BOLKMS BO105S				WARNING BOX KDW021A	FAILED ROTOR RPM		1/6/98 HEEA0012479
ROTOR RPM WARNING LIGHT COMES ON IN FLIGHT.									
7323 AC2R	5366Y S782	BOLKMS BO105S	ALLSN 250C20B			GOVERNOR 23057869	FAILED ENGINE	7134	12/7/97 98ZZZX297
FLUCTUATING TORQUE SETTING. FOUND GOVERNOR DRIVE BROKEN. REPLACED GOVERNOR.									
7714 HEEA	4302G S853	BOLKMS BO105S				INDICATOR DL40438	FAILED TRIPLE TACH N2		1/5/98 HEEA0012429
N2 NR2 NEEDLE INDICATES 30% LOW AT 100% RPM. TIME SINCE REPAIR 23:50.									
7923 HEEA	9190Y S669	BOLKMS BO105S				VALVE 209072433101	FAILED OIL SYS		1/6/98 HEEA0012511
OIL SYS VALVE WILL NOT OPEN.									
2211 TI1R	911MZ 7098	BOLKMS BK117A3				COMPUTER 7004206901	FAILED CSAS		11/13/97 98ZZZX283
CSAS COMPUTER CAUSES FLUCTUATIONS IN PITCH ACTUATOR. NOISY SIGNAL COMING OUT OF PINS 18 AND 19. REMOVED AND REPLACED.									
2430 TI1R	117LU 7144	BOLKMS BK117B1				SWITCH SP461300	FAILED DC SYSTEM		10/9/97 98ZZZX271
SWITCH WILL NOT STAY ENGAGED. REMOVED AND REPLACED.									
2435 HEEA	217UC 7152	BOLKMS BK117B1			23032048	ARMATURE 230322111	SHORTED GENERATOR		1/5/98 HEEA0012426
GENERATOR FAILED (SHORTED OUT)									
3421 TI1R	911MZ 7098	BOLKMS BK117A3			92082227	ARTIFICIAL HORIZ 4021541671	NOISY CSAS PITCH		11/13/97 98ZZZX282
ARTIFICIAL HORIZ CAUSES CSAS PITCH ACTUATOR TO FLUCTUATE. SIGNAL OUT OF PINS, X AND Y ARE TOO NOISY SIMULATING PITCH UP OR DOWN. REMOVED AND REPLACED.									
6210 TI1R		BOLKMS BK117B1				BUSHING 1051585403	DEFECTIVE M/R BLADE		11/6/97 98ZZZX267
BUSHING HAS DEFECTIVE PHONELIC LINING. REMOVED AND REPLACED.									
6240 TI1R	214AE 7206	BOLKMS BK117B1				TRIPLE TACH 1179405303	FAILED ROTOR RPM		10/28/97 98ZZZX275
TRIPLE TACHOMETER ROTOR RPM NEEDLE LAGS N2'S IN-FLIGHT. REMOVED AND REPLACED.									

***** DENOTES SIGNIFICANT OCCURRENCE

DOMESTIC SERVICE DIFFICULTY REPORT SUMMARY - HELICOPTERS (cont'd)

1/18/98 To 1/24/98 ISSUE: 98-04 ZAC-327

ATA OPER	REG. NO SERIAL NO	ACFT MAKE ACFT MODEL	ENG MAKE ENG MDL	PROP MAKE PROP MDL	COMP MFG COMP MDL	PART NAME PART NUMBER	PART COND PART LOC.	TT TSO	DIFF. DATE OPER CONT NO
6420 HEEA	401PH 7050	BOLKMS BK117A3				INNER SLEEVE 105317381	WORN T/R HEAD		1/5/98 HEEA0012428
T/R HEAD BEARING BUSHING SEATS AND SEAL RIDE WORN.									
6420 HEEA	132AE 7238	BOLKMS BK117B2				INNER SLEEVE 105317381	WORN T/R HEAD	1802	1/5/98 HEEA0012427
T/R HEAD BEARING BUSHING SEATS AND SEAL RIDE WORN.									
7714 TI1R	117CH 7061	BOLKMS BK117A3				INDICATOR 1179405603	FAILED ENGINE NG		11/6/97 98ZZZX270
NG INDICATOR SLOW TO INDICATE AND FALLS OFF-LINE ON DECELERATION. PREVIOUSLY SENT FOR WARRANTY REPAIR ON P.O. 93129. FAILED APPROXIMATELY ONE WEEK AFTER INSTALLATION.									
7714 TI1R	117CH 7061	BOLKMS BK117A3				INDICATOR 1179405603	FAILED ENGINE NG		11/12/97 98ZZZX269
NG INDICATOR SLOW TO INDICATE. FALLS OFF-LINE ON DECELERATION AT 8 PERCENT. READS ALMOST 2 PERCENT LOW. REMOVED AND REPLACED.									
7714 TI1R	117CH 7061	BOLKMS BK117A3				INDICATOR 1179405603	FAILED ENGINE NG		11/25/97 98ZZZX268
NG INDICATOR SLOW TO INDICATE, FALLS OFF-LINE AT 5 PERCENT ON DECELERATION. REMOVED AND REPLACED.									
7714 TI1R	214AE 7206	BOLKMS BK117B1				TRIPLE TACH 1179405303	FAILED ENGINE N2	3	11/10/97 98ZZZX274
TRIPLE TACHOMETER N2 NEEDLE HANGS UP AT 98 PERCENT. REMOVED AND REPLACED.									
2211 TI1R	117NC 7509	BOLKMS BK117C1				COMPUTER 11788292	FAILED SPAS		11/4/97 98ZZZX273
SPAS COMPUTER HAS IMPROPER OUTPUT VOLTS. REMOVED AND REPLACED.									
3416 TI1R	317MC 7505	BOLKMS BK117C1				ALTIMETER 10222011886	FAILED COCKPIT ENCODER		10/31/97 98ZZZX276
ALTIMETER DROPS 300 FEET AT 10,000 FEET. WILL NOT HOLD ALTITUDE. REMOVED AND REPLACED.									
6720 TI1R	117NC 7509	BOLKMS BK117C1				PITCH LINK ASSY 11731822	WORN TAIL ROTOR	333	10/28/97 98ZZZX272
PITCH LINK ASSY (2 EACH) BEARINGS WORN. REMOVED AND REPLACED.									
3425 HEEA	6123A S1523	HUGHES 269C				HSI CONTROL 066304605	FAILED COCKPIT		1/6/98 HEEA0012513
HSI HEADING POINTER WILL NOT INDICATE.									
2210 HEEA	22342 760096	SKRSKY S76A				INDICATOR PANEL 7690001804103	FAILED YAW POSITION		1/6/98 HEEA0012480
YAW INDICATOR PANEL FAILED. CANNOT READ POSITIONS.									
2612 ALGA	703AL 760266	SKRSKY S76				FLAME DETECTOR 61423473205	FAILED NR 1 ENGINE		11/13/97 98ZZZX307
NR 1 ENGINE T-HANDLE FIRE LIGHTS ILLUMINATED INTERMITTENTLY. CHECKED THE CANNON PLUG FOR MOISTURE, FUNCTIONALLY TESTED AND FOUND TO STILL BE INTERMITTENT. REMOVED AND REPLACED NR 1 ENGINE FLAME DETECTOR.									

***** DENOTES SIGNIFICANT OCCURRENCE

DOMESTIC SERVICE DIFFICULTY REPORT SUMMARY - HELICOPTERS (cont'd)

1/18/98 To 1/24/98 ISSUE: 98-04 ZAC-327

ATA OPER	REG. NO SERIAL NO	ACFT MAKE ACFT MODEL	ENG MAKE ENG MDL	PROP MAKE PROP MDL	COMP MFG COMP MDL	PART NAME PART NUMBER	PART COND PART LOC.	TT TSO	DIFF. DATE OPER CONT NO
2612 ALGA	768AL 760031	SKRSKY S76A				FLAME DETECTOR 47320501	FAILED NR 1 ENGINE		11/13/97 98ZZZX308
NR 1 ENGINE T-HANDLE FIRE LIGHT ILLUMINATED INTERMITTENTLY. REMOVED AND REPLACED NR 1 ENGINE FORWARD FLAME DETECTOR.									
2612 ALGA	712AL 760280	SKRSKY S76A				DETECTOR 7630607902104	MALFUNCTION NR 2 FORWARD		11/19/97 98ZZZX241
DURING CRUISE FLIGHT, NR 2 FIRE LIGHT ILLUMINATED. RETURNED TO BASE. NO FIRE-FLAME. DETECTOR MALFUNCTION.									
2840 HEEA	31219 760230	SKRSKY S76A				TRANSMITTER 7645001078119	FAILED FUEL SYS		1/6/98 HEEA0012500
FUEL PRESSURE TRANSMITTER READS HIGH OUT OF TOLERANCE.									
3421 HEEA	1547D 760077	SKRSKY S76A				VERTICAL GYRO 7660002113103	FAILED NR 1 PITCH		1/6/98 HEEA0012483
NR 1 PITCH STARTS TO KICK 45 MINUTES TO 1 HOUR IN FLIGHT.									
3421 HEEA	706AE 760275	SKRSKY S76A				VERTICAL GYRO 7660002113103	FAILED COCKPIT		1/6/98 HEEA0012484
VERT GYRO PRECESSES.									
3425 HEEA	5435V 760158	SKRSKY S76A				INDICATOR 1113025	STICKING HSI RMI		1/6/98 HEEA0012470
HSI RMI NEEDLE STICKING INTERMITTENTLY.									
3444 HEEA	706AE 760275	SKRSKY S76A				ALTIMETER 066304400	FAILED COCKPIT		1/5/98 HEEA0012445
RADAR ALTIMETER NEEDLE WILL START SPINNING FOR A FEW SECONDS THEN STOP.									
6210 ALGR	376AL 760002	SKRSKY S76A				BLADE 7615009100051	DEBONDED M/R	7208 487	12/2/97 98ZZZX255
DISCOVERED DURING 500-HOUR INSPECTION, M/R BLADE TIP RIB STRAP AND DOUBLERS DEBONDED.									
6210 ALGR	741SW 760070	SKRSKY S76A				BLADE 7615009100049	DEBONDED M/R	11725	12/9/97 98ZZZX242
DISCOVERED DURING 11,750 HOUR INSPECTION, M/R BLADE, LOWER ROOT END LAMINATE DEBONDED BEYOND ALLOWABLE LIMITS PER SA4047-76-5, CHAPTER 2. SENT TO SIKORSKY AIRCRAFT FOR FURTHER EVALUATION/REPAIR.									
6210 ALGR	708AL 760277	SKRSKY S76A				BLADE 7715009100049	DEBONDED M/R	11505 559	9/29/97 98ZZZX246
DISCOVERED DURING EVALUATION OF BLADE ASSEMBLY PRIOR TO SHIPMENT TO REPAIR FACILITY, TIP RIB ASSEMBLY DEBONDED.									
6210 ALGR	708AL 760277	SKRSKY S76A				BLADE 7615009100049	DEBONDED M/R	11505 559	9/29/97 98ZZZX245
MALFUNCTION WAS DISCOVERED DURING 11,750 HOUR INSPECTION, M/R BLADE ROOT END LAMIMATES DEBONDED BEYOND ACCCEPTABLE LIMITS.									
6410 HEEA		SKRSKY S76				BLADE 7610105101041	SPLIT T/R PADDLE B	4836	1/5/98 HEEA0012421
TRAILING EDGE SPLIT OPEN ON PADDLE "B" AND HOLE IN THE LEADING EDGE ABRASION STRIP.									

***** DENOTES SIGNIFICANT OCCURRENCE

DOMESTIC SERVICE DIFFICULTY REPORT SUMMARY - HELICOPTERS (cont'd)

1/18/98 To 1/24/98 ISSUE: 98-04 ZAC-327

ATA OPER	REG. NO SERIAL NO	ACFT MAKE ACFT MODEL	ENG MAKE ENG MDL	PROP MAKE PROP MDL	COMP MFG COMP MDL	PART NAME PART NUMBER	PART COND PART LOC.	TT TSO	DIFF. DATE OPER CONT NO
6410 HEEA	4253S 760035	SKRSKY S76A				BLADE 7610105101041	DEFECTIVE T/R	443	1/5/98 HEEA0012423
T/R BLADE PRIMARY RUBBER LIFTING.									
6410 HEEA	5426U 760167	SKRSKY S76A				BLADE 7610105101041	DEFECTIVE T/R HORN B	9943	1/5/98 HEEA0012422
PITCH HORN "B" HAS REACHED RETIREMENT TIME.									
6410 HEEA	707AE 760276	SKRSKY S76A				BLADE 7610105101041	UNBONDED T/R	408	1/5/98 HEEA0012424
T/R BLADE LINER BETWEEN THE SPAR AND THE PLUG TORN AND UNBONDED.									
7120 ALGR	164AG 760290	SKRSKY S76A				TUBE 7630907007048	CORRODED ENGINE MOUNT		12/11/97 98ZZZX251
DEFECT DISCOVERED DURING 1,750 HOURLY INSPECTION OF ENGINE MOUNTS. WHILE BORESCOPING INSIDE OF TUBE, CORROSION WAS FOUND THAT EXCEEDED LIMITS. INSIDE OF TUBE ASSEMBLY CORRODED AND PITTED. SUBMITTER SUGGESTED USING BETTER CORROSION PREVENTATIVE METHODS.									
7931 HEEA	4253S 760035	SKRSKY S76A				INDICATOR 7645001078101	STICKS ENG OIL		1/5/98 HEEA0012420
NR2 ENGINE OIL PRESSURE NEEDLE FLUCTUATES ON TEMP/PRESS INDICATOR.									
(End of DOMESTIC SERVICE DIFFICULTY REPORT SUMMARY - HELICOPTERS)									

DOMESTIC SERVICE DIFFICULTY REPORT SUMMARY - ENGINES**1/18/98 - 1/24/98 ISSUE: 98-04 ZAC-327**

ATA OPER	REG. NO SERIAL NO	ACFT MAKE ACFT MODEL	ENG MAKE ENG MDL	PROP MAKE PROP MDL	COMP MFG COMP MDL	PART NAME PART NUMBER	PART COND PART LOC.	TT TSO	DIFF. DATE OPER CONT NO
7320 HEEA	417PH 53038	BELL 407				HMU 23068651	FAILED ENGINE	578	1/5/98 HEEA0012446
FADEC DEGRADE AND RESTART FAULT LIGHT ON IN FLIGHT. REPLACEMENT S/N ALM0437.									
7210 HEEA	6559Z 36019	BELL 412				COMBINING GRBOX 3024780	MAKING METAL ENGINE	14154	1/6/98 HEEA0012456
COMBINING GEARBOX HAS METAL ON PLUG AND FILTER.									
7250 HEEA	107X 33113	BELL 412				CASE 3017600	CRACKED ENGINE	11668	1/6/98 HEEA0012457
ENGINE HAS CRACK IN GENERATOR CASE.									
7314 HEEA	107X 33113	BELL 412	PWA PT6T3B			FUEL PUMP 02527730006	FAILED NR 1 ENGINE	8164 4191	9/30/97 98ZZZX291
ON OUTBOUND FLIGHT, NR 1 ENGINE FLAMED OUT. RETURNED TO SHORE BASE AND MADE UNEVENTFUL SINGLE ENGINE LANDING. MAINTENANCE INVESTIGATION REVEALED INTERNAL SPLINE FAILURE OF PUMP AND COUPLING DRIVE. REF: P & W IPC, CHAPTER 72-00-11, FIGURE 1, ITEM 10.									
7323 AC2R	5366Y S782	BOLKMS BO105S	ALLSN 250C20B			GOVERNOR 23057869	FAILED ENGINE	7134	12/7/97 98ZZZX297
FLUCTUATING TORQUE SETTING. FOUND GOVERNOR DRIVE BROKEN. REPLACED GOVERNOR.									
8550	67932 15282107	CESSNA 152	LYC O235L2C			OIL FILTER CH48110	BULGED ENGINE OIL	1	11/24/97 98ZZZX230
FILTER REPLACED 11-24-97. ENGINE GROUND CHECKED. OIL PRESSURE NORMAL. ON NEXT FLIGHT, OIL WAS LOST OVERBOARD. ON EXAMINATION, FILTER WAS FOUND ELONGATED AND BULGED. FILTER TAKEN TO HAGGLIN MOTOR FOR INVESTIGATION. CONCLUSION WAS BULGING LIFTED FILTER OFF SEAT, DUMPING OIL.									
8530	7115M 55415	CESSNA 175	CONT GO300A			ROCKER BOSS	FAILED NR 4 CYLINDER	10/3/97 248	98ZZZX224
DURING ANNUAL INSPECTION, NR 4 CYLINDER COMP AT 50/80 WITH AIR NOISE IN EXHAUST STACK. ON REMOVAL OF ROCKER BOX COVER, THE TOP HALF OF THE LEFT BOSS CAME OUT WITH THE COVER. TEN HOURS PREVIOUSLY, THE COVER HAD BEEN REMOVED AND PUSH ROD TUBES HAD BEEN RESEALED. SUBMITTER STATED THE BOSS MAY HAVE BEEN CRACKED WHEN THE ROCKER ARM SHAFT WAS REMOVED OR INSTALLED.									
8520	2838D 287916463	PIPER PA28161	LYC O320D3G			CRANKSHAFT	FAILED NR 4 ROD JOURNAL	6600 180	12/31/97 98ZZZX222
AIRCRAFT TOOK OFF FROM HANSCOM AND LANDED AT NANTUCKET WITHOUT INCIDENT. PILOT GOT BACK INTO AIRCRAFT AND TAXIED TO THE RUNWAY. DURING TAKEOFF ROLL, PILOT HEARD A LOUD KNOCKING SOUND AND ABORTED TAKEOFF AND TAXIED BACK TO HANGAR. AFTER PULLING ALL THE CYLINDERS OFF AND REMOVING ALL CONNECTING RODS, THE NR 4 CONNECTING ROD JOURNAL WAS FOUND CRACKED IN HALF. THE NR 4 CONN ROD WAS HOLDING THE CRANKSHAFT TOGETHER.									
7414	59829 317652081	PIPER PA31350	LYC LTIO540J2BD		BENDIX	MAGNETO 1068291013	FAILED DRIVE GEAR	142	1/2/97 98ZZZX223
UPON TAKING THE CAP OFF THE MAGNETO, NOTED THAT ONE OF THE DRIVE GEAR TEETH WAS BROKEN OFF FROM THE NYLON DISTRIBUTOR GEAR. NOTE: THE DIRECTOR OF MAINTENANCE REPORTED A TIMING TOOL WAS NOT USED.									
7414 YECR	3527U 317952141	PIPER PA31350	LYC TIO540J2BD		D6RN3200	DIST BLOCK 10682056	WORN MAGNETO	443	11/18/97 98ZZZX228
INSPECTION OF MAGNETO DISTRIBUTOR BLOCK FOUND BUSHING WEAR AND WEAR DAMAGE TO LARGE DISTRIBUTOR GEAR.									

***** DENOTES SIGNIFICANT OCCURRENCE

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8530	3521S	PIPER	LYC			RING	BROKEN	1226	1/14/98
BIEA	317952107	PA31350	TIO540J2BD			73857	NR 4 CYLINDER	1226	BIER9801049
AT 50 HOUR INSP DURING OIL SUCTION SCREEN INSP, FOUND .125 INCH METAL PIECE, CLOSER INSP REVEALED THAT IT WAS AN OIL RING PART. REMOVED CYL, FOUND OIL CONTROL RING BROKEN AND PISTON LAND BROKEN WITH HOLE WORN IN PISTON. SUBMITTER STATES THIS SHOWS THE IMPORTANCE OF CLOSE EXAMINATION OF OIL SUCTION SCREEN AND FILTER AT OIL CHANGE.									

(End of DOMESTIC SERVICE DIFFICULTY REPORT SUMMARY - ENGINES)

DOMESTIC SERVICE DIFFICULTY REPORT SUMMARY - COMPONENTS**1/18/98 - 1/24/98 ISSUE: 98-04 ZAC-327**

ATA OPER	REG. NO SERIAL NO	ACFT MAKE ACFT MODEL	ENG MAKE ENG MDL	PROP MAKE PROP MDL	COMP MFG COMP MDL	PART NAME PART NUMBER	PART COND PART LOC.	TT TSO	DIFF. DATE OPER CONT NO
2370 HEEA	39PH BL3	BEECH 200CBEECH				CVR 9806019001	FAILED COCKPIT	4058	1/6/98 HEEA0012453
CVR WILL NOT TEST.									
3432 HEEA	30PH BB635	BEECH 200BEECH				INDICATOR 5222638006	FAILED GLIDESLOPE		1/6/98 HEEA0012467
COURSE INDICATOR GLIDESCOPE STAYS FLAGGED AND INOPERATIVE.									
2312 HEEA	31077 51520	BELL 206L3				TRANSCIEVER 064105430	FAILED COCKPIT		1/5/98 HEEA0012444
TRANSCIEVER FREQUENCY DISPLAY INOPERATIVE.									
3423 HEEA	2251Z 45756	BELL 206L1				COMPASS C2300DL4B	DEFECTIVE COCKPIT		1/6/98 HEEA0012514
COMPASS [24 VOLT] IS OUT OF LIMITS.									
3453 HEEA	3178K 45765	BELL 206L1			ARNAV20	RECEIVER 4530093	FAILED COCKPIT		1/5/98 HEEA0012434
LORAN RECEIVER WILL NOT ACKNOWLEDGE WAYPOINT ALERT.									
3457 HEEA	2761N 45277	BELL 206L1				GPS ANTENNA S67157539	FAILED GPS SYS		1/5/98 HEEA0012436
GPS ANTENNA WILL NOT PICK UP SATELLITES OR FIND ITSELF.									
2370 HEEA	5736D 31135	BELL 212				CVR 9806019001	FAILED COCKPIT	2816	1/6/98 HEEA0012454
CVR FAILED TEST.									
2562 HEEA	1079U 31122	BELL 212				EPIRB ACRRLB21	DEFECTIVE ANTENNA		1/6/98 HEEA0012485
EPIRB ANTENNA BROKEN AND BODY CRACKS IN BOTTOM.									
3442 HEEA	102PH 30899	BELL 212			P4001	INDICATOR MI5852013	FAILED COCKPIT		1/5/98 HEEA0012435
RADAR SYSTEM WOULD COME ON, BUT SCREEN WAS BLANK. AFTER AWHILE, SYSTEM WOULD SHUTDOWN.									
2312 TI1R	911MK 47515	BELL 222			RT138	TRANSCIEVER 4000102000	FAILED COCKPIT		11/5/97 98ZZZX281
UPON INITIAL TRANSCIEVER INSTALLATION, CIRCUIT BREAKER TRIPS WHEN TRANSMITTER BUTTON IS KEYED. REMOVED AND REPLACED.									
2562 HEEA	293CA	BELL 412				ELT 3000	FAILED COCKPIT		1/6/98 HEEA0012482
ELT OUTPUT DISTORTED.									
3413 HEEA	22608 33075	BELL 412				INDICATOR 212070239001	DEFECTIVE COCKPIT		1/15/98 HEEA0012584
RATE OF CLIMB INDICATOR. INSPECT FOR POSSIBLE WATER DAMAGE. COMPLY WITH ASB 214ST-97-79, PART 2.									

***** DENOTES SIGNIFICANT OCCURRENCE

DOMESTIC SERVICE DIFFICULTY REPORT SUMMARY - COMPONENTS (cont'd)

1/18/98 To 1/24/98 ISSUE: 98-04 ZAC-327

ATA OPER	REG. NO SERIAL NO	ACFT MAKE ACFT MODEL	ENG MAKE ENG MDL	PROP MAKE PROP MDL	COMP MFG COMP MDL	PART NAME PART NUMBER	PART COND PART LOC.	TT TSO	DIFF. DATE OPER CONT NO
3424 HEEA	3893N 33010	BELL 412				RATE GYRO 214075244001	FAILED COCKPIT		1/6/98 HEEA0012515
RATE GYRO INOPERATIVE. WILL NOT PULL RT FLAG ON HSI AND WILL NOT SHOW DEFLECTION IN TURN.									
3425 HEEA	3893N 33010	BELL 412				INDICATOR 1113025	FAILED HSI COURSE		1/6/98 HEEA0012469
HSI COURSE WINDOW NUMBERS JAMMED.									
3457 HEEA	2148K 36001	BELL 412			GARMIN INTL	GPS165 0110010600	FAILED COCKPIT		1/5/98 HEEA0012433
GPS 165 UNIT MESSAGE: INTERNAL BATTERY LOW.									
2211 TI1R	911MZ 7098	BOLKMS BK117A3				COMPUTER 7004206901	FAILED CSAS		11/13/97 98ZZZX283
CSAS COMPUTER CAUSES FLUCTUATIONS IN PITCH ACTUATOR. NOISY SIGNAL COMING OUT OF PINS 18 AND 19. REMOVED AND REPLACED.									
3421 TI1R	911MZ 7098	BOLKMS BK117A3				ARTIFICIAL HORIZ 4021541671	NOISY CSAS PITCH		11/13/97 98ZZZX282
ARTIFICIAL HORIZ CAUSES CSAS PITCH ACTUATOR TO FLUCTUATE. SIGNAL OUT OF PINS, X AND Y ARE TOO NOISY SIMULATING PITCH UP OR DOWN. REMOVED AND REPLACED.									
2211 TI1R	117NC 7509	BOLKMS BK117C1				COMPUTER 11788292	FAILED SPAS		11/4/97 98ZZZX273
SPAS COMPUTER HAS IMPROPER OUTPUT VOLTS. REMOVED AND REPLACED.									
3416 TI1R	317MC 7505	BOLKMS BK117C1				ALTIMETER 10222011886	FAILED COCKPIT ENCODER		10/31/97 98ZZZX276
ALTIMETER DROPS 300 FEET AT 10,000 FEET. WILL NOT HOLD ALTITUDE. REMOVED AND REPLACED.									
6122 R2JR	690HT 11467	GULSTM 690B			WOODWARD	GOVERNOR 210735	SEIZED PROPELLER		12/23/97 98ZZZX288
ON TAXI, ENGINE HAD TO BE SHUT DOWN DUE TO LOW RPM AND HIGH ITT IN BETA. MAINTENANCE DISCOVERED PROPELLER GOVERNOR HAD FAILED INTERNALLY CAUSING MODERATE AMOUNTS OF GROUND METAL TO BE PUMPED INTO NOSE CASE. GOVERNOR SHAFT SEIZED. ENGINE REMOVED FOR TEAR-DOWN INSPECTION DUE TO ZERO TORQUE AND HIGH OIL PRESSURE AFTER GOVERNOR WAS CHANGED. SUSPECT METAL CONTAMINATION. OIL COOLER, ENGINE, AND OIL CHANGED. ALL OIL LINES FLUSHED. GOV SENT TO GARRETT AND ENGINE SENT TO GARETT SERVICE CENTER. GARRETT P/N IS 894418-6Y.									
3425 HEEA	6123A S1523	HUGHES 269C				HSI CONTROL 066304605	FAILED COCKPIT		1/6/98 HEEA0012513
HSI HEADING POINTER WILL NOT INDICATE.									
2210 HEEA	22342 760096	SKRSKY S76A				INDICATOR PANEL 7690001804103	FAILED YAW POSITION		1/6/98 HEEA0012480
YAW INDICATOR PANEL FAILED. CANNOT READ POSITIONS.									
3421 HEEA	1547D 760077	SKRSKY S76A				VERTICAL GYRO 7660002113103	FAILED NR 1 PITCH		1/6/98 HEEA0012483
NR 1 PITCH STARTS TO KICK 45 MINUTES TO 1 HOUR IN FLIGHT.									
3421 HEEA	706AE 760275	SKRSKY S76A				VERTICAL GYRO 7660002113103	FAILED COCKPIT		1/6/98 HEEA0012484
VERT GYRO PRECESSES.									

***** DENOTES SIGNIFICANT OCCURRENCE

DOMESTIC SERVICE DIFFICULTY REPORT SUMMARY - COMPONENTS (cont'd)

1/18/98 To 1/24/98 ISSUE: 98-04 ZAC-327

ATA OPER	REG. NO SERIAL NO	ACFT MAKE ACFT MODEL	ENG MAKE ENG MDL	PROP MAKE PROP MDL	COMP MFG COMP MDL	PART NAME PART NUMBER	PART COND PART LOC.	TT TSO	DIFF. DATE OPER CONT NO
3425	5435V	SKRSKY				INDICATOR	STICKING		1/6/98
HEEA	760158	S76A				1113025	HSI RMI		HEEA0012470
HSI RMI NEEDLE STICKING INTERMITTENTLY.									
3444	706AE	SKRSKY				ALTIMETER	FAILED		1/5/98
HEEA	760275	S76A				066304400	COCKPIT		HEEA0012445
RADAR ALTIMETER NEEDLE WILL START SPINNING FOR A FEW SECONDS THEN STOP.									
(End of DOMESTIC SERVICE DIFFICULTY REPORT SUMMARY - COMPONENTS)									

DOMESTIC SERVICE DIFFICULTY REPORT SUMMARY - PROPELLERS**1/18/98 - 1/24/98 ISSUE: 98-04 ZAC-327**

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6110		BEECH 100BEECH		HARTZL HCB3TN3		WIRE 38012	DAMAGED PROPELLER ASSY	2018	6/1/96 EY2R9601562
		PROP ASSY I.D. WIRE DAMAGE							
6110		BEECH 100BEECH		HARTZL HCB4TN5		HIGH PTCH STOP 83034	BENT PROPELLER ASSY		5/1/96 EY2R9601517
		HIGH PITCH STOP FOUND BENT.							
6110		BEECH 100BEECH		HARTZL HCB3TN3		CLAMP 13019S	MISDRILLED PROPELLER ASSY	6715	6/1/96 EY2R9601560
		PROP ASSY CLAMP HAS MISDRILLED 321 SCREWS.							
6110		BEECH 100BEECH		HARTZL HCB4TN5		HIGH PTCH STOP 3494	BENT PROPELLER ASSY		5/1/96 EY2R9601516
		PROPELLER ASSY HIGH PITCH STOP FOUND BENT.							
6110		BEECH 100BEECH		HARTZL HCB3TN3		LOW STOP COLLAR 30012	DEFECTIVE PROPELLER ASSY	6715	6/1/96 EY2R9601561
		LOW STOP COLLAR IS .30 INCH OUT OF ROUND.							
6114		BEECH 18S		HARTZL HCB3R304		HUB 84074	DAMAGED PROPELLER ASSY		3/1/96 EY2R9601461
		HUB HAS DEEP DEEP SCRATCHES BETWEEN SPLINES							
6110		BEECH 200BEECH		HARTZL HCB3TN3		LOW STOP COLLAR 30012	WORN PROPELLER ASSY		3/1/96 EY2R9601462
		PROP LOW STOP COLLAR IS WORN							
6114		BEECH D55		MCAULY 3AF32C75		HUB D7015C75	DAMAGED PROPELLER ASSY		7/1/96 EY2R9601570
		PROP HUB OUTSIDE DAMAGE							
6110		BEECH C90		HARTZL HCB3TN3		LOW STOP COLLAR 3475A2	BENT PROPELLER ASSY	3181 1979	5/1/96 EY2R9601509
		PROP ASSY LOW STOP COLLAR BENT							
6114		BEECH 95B55		HARTZL PHCC3YF2		HUB 32517	DAMAGED PROPELLER ASSY	1545	6/1/96 EY2R9601568
		PROP HUB DOWEL PINS ENLARGED							
6110		BNORM BN2A3		HARTZL HCC2YK2		PITCH CHANGE 24573	WORN PROP ASSY FORK		6/1/96 EY2R9601564
		PROP ASSY PITCH CHANGE FORK WORN							
6110		CESSNA 172		HARTZL HCC2YK1		BEARING 2020	WORN PROPELLER ASSY		4/1/96 EY2R9601488
		PROP ASSY BEARING WORN							

***** DENOTES SIGNIFICANT OCCURRENCE

DOMESTIC SERVICE DIFFICULTY REPORT SUMMARY - PROPELLERS (cont'd)

1/18/98 To 1/24/98 ISSUE: 98-04 ZAC-327

ATA OPER	REG. NO SERIAL NO	ACFT MAKE ACFT MODEL	ENG MAKE ENG MDL	PROP MAKE PROP MDL	COMP MFG COMP MDL	PART NAME PART NUMBER	PART COND PART LOC.	TT TSO	DIFF. DATE OPER CONT NO
6110		CESSNA 172RG		MCAULY B2D34C220		BALL BEARING A16349	DEFECTIVE PROPELLER ASSY	5633 1131	7/1/96 EY2R9601579
		PROP ASSY BEARINGS FLAT							
6114		CESSNA 177		HARTZL HCC2YR1		HUB 220117	DAMAGED PROPELLER ASSY		3/1/96 EY2R9601466
		HUB GREASE FITTING HOLE DAMAGED							
6110		CESSNA 182		HARTZL HCC3YF1		PISTON ROD 24182	DAMAGED PROPELLER ASSY	1873 168	3/1/96 EY2R9601467
		PROP ASSY PISTON ROD ASSY DAMAGED							
6110		CESSNA 182		MCAULY B2D34C214		PISTON C3418	DAMAGED PROPELLER ASSY		6/1/96 EY2R9601552
		PROP ASSY PISTON IS DAMAGED							
6111		CESSNA P206B		MCAULY E2A34C73		BLADE S90AT8	OTHER STRIPPED	1187	6/1/96 EY2R9601556
		BLADE SN EJ299YS, THREADS CHIPPED							
6111		CESSNA P206B		MCAULY E2A34C73		BLADE S90AT8	STRIPPED PROPELLER ASSY	1187	6/1/96 EY2R9601557
		BLADE SN EJ247YS, THREADS CHIPPED							
6114		CESSNA P206A		MCAULY D3A32C90		HUB D4197C90	MIS DRILLED PROPELLER ASSY	3698 972	4/1/96 EY2R9601483
		PROP HUB WELCH PLUG HOLES DRILLED WRONG							
6110		CESSNA 208		MCAULY 3GFR34C703		BETA ROD C5503	WORN PROPELLER ASSY	2566	7/1/96 EY2R9601577
		PROP BETA ROD WORN							
6110		CESSNA 208		MCAULY 3GFR34C703		CYLINDER D5010	GROOVED PROPELLER ASSY	2566	7/1/96 EY2R9601578
		PROP ASSY CYLINDER GROOVED EXCESSIVELY							
6110		CESSNA 210		MCAULY D3A34C402		ROLL PIN A31504	BENT PROPELLER ASSY		6/1/96 EY2R9601554
		PROP ASSY ROLL PIN BENT							
6110		CESSNA 210M		MCAULY D3A32C88		RETAIN RING B3478	BENT PROPELLER ASSY		5/1/96 EY2R9601504
		PROP ASSY RETAIN RING IS BENT							
6110		CESSNA T210N		MCAULY D3A34C402		CYLINDER C5264	DAMAGED PROPELLER ASSY		7/1/96 EY2R9601580
		PROP ASSY CYLINDER DAMAGED							

***** DENOTES SIGNIFICANT OCCURRENCE

DOMESTIC SERVICE DIFFICULTY REPORT SUMMARY - PROPELLERS (cont'd)

1/18/98 To 1/24/98 ISSUE: 98-04 ZAC-327

ATA OPER	REG. NO SERIAL NO	ACFT MAKE ACFT MODEL	ENG MAKE ENG MDL	PROP MAKE PROP MDL	COMP MFG COMP MDL	PART NAME PART NUMBER	PART COND PART LOC.	TT TSO	DIFF. DATE OPER CONT NO
6110		CESSNA T303		MCAULY 3AF32C506		CYLINDER C4283	DENTED PROPELLER ASSY		6/1/96 EY2R9601535
		PROP ASSY CYLINDER DENTED							
6110		CESSNA T303		MCAULY 3AF32C506		PISTON ROD ASSY C3474	BENT PROPELLER ASSY		6/1/96 EY2R9601534
		PISTON ROD ASSY BENT							
6110		CESSNA 310R		MCAULY 3AF32C87		PISTON ROD D3474	WORN PROPELLER ASSY		4/1/96 EY2R9601475
		PROP ASSY PISTON ROD ASSY IS WORN							
6110		CESSNA 310R		MCAULY 3AF32C87		PISTON ROD ASSY D3474	WORN PROPELLER ASSY		4/1/96 EY2R9601474
		PROP ASSY PISTON ROD ASSY WORN							
6111		CESSNA 310L		MCAULY D3AF32C80		BLADE S82NC4	DAMAGED PROPELLER ASSY		6/1/96 EY2R9601555
		BLADE SN K77739YS, SCRATCH IN THREADS							
6111		CESSNA 310Q		MCAULY 3AF32C87		ACTUATING PIN B4459	WORN BLADE	3428 501	5/1/96 EY2R9601498
		PROP ASSY BLADE ACTUATING PIN WORN							
6111		CESSNA 310R		MCAULY 3AF32C87		ACTUATING PIN C4459	DAMAGED PROPELLER ASSY		6/1/96 EY2R9601540
		PROP ASSY BLADE ACTUATING PIN DAMAGED							
6114		CESSNA 310		MCAULY D2AF34C81		HUB D4887C81	FRETTED PROP ASSY		3/1/96 EY2R9601456
		PROP HUB HAS EXCESSIVE FRETTING.							
6114		CESSNA 310		MCAULY 3AF32C87		HUB D7015C87	DAMAGED PROPELLER ASSY		7/1/96 EY2R9601575
		PROP HUB STAKING PIN HOLE TOO DEEP							
6114		CESSNA 310		MCAULY 3AF32C87		HUB D7015C87	MIS DRILLED PROPELLER ASSY		7/1/96 EY2R9601574
		NR1 SOCKET, STAKNG PIN DRILLED WRONG							
6114		CESSNA 340CESSNA		MCAULY 3AF32C87		HUB D7015C87	MIS DRILLED PROPELLER ASSY		7/1/96 EY2R9601576
		HUB STAKING PIN HOLE DRILLED WRONG							
6110		CESSNA 402B		MCAULY 3AF32C87		FEATHER CYLINDER C3550	WORN PROPELLER ASSY		7/1/96 EY2R9601571
		PROP FEATHER CYLINDER WORN							

***** DENOTES SIGNIFICANT OCCURRENCE

DOMESTIC SERVICE DIFFICULTY REPORT SUMMARY - PROPELLERS (cont'd)

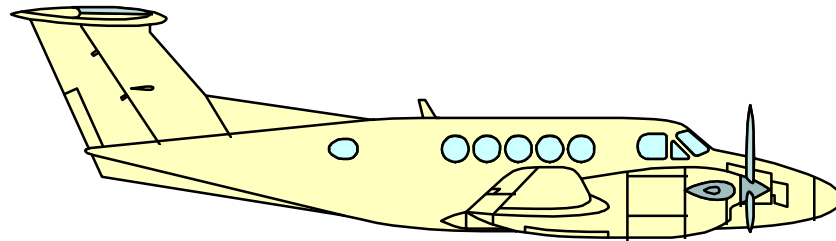
1/18/98 To 1/24/98 ISSUE: 98-04 ZAC-327

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6110		CESSNA 402B		MCAULY 3AF32C87		FEATHER CYLINDER C3550	WORN PROPELLER ASSY		7/1/96 EY2R9601572
		PROP FEATHER CYLINDER WORN							
6114		CESSNA 402B		MCAULY 3AF32C87		HUB D7015C87	DAMAGED PROPELLER ASSY		7/1/96 EY2R9601573
		HUB EXPANSION HOLE TOO DEEP							
6110		CESSNA 414		MCAULY 3AF32C93		LINK ASSY B4650	BENT PROPELLER ASSY	453	5/1/96 EY2R9601501
		PROP LINK ASSY IS BENT							
6110		CESSNA 421		MCAULY 3AF34C92		FEATHER CYLINDER C3550	DEFECTIVE PROPELLER ASSY		6/1/96 EY2R9601545
		PROP ASSY FEATHER ASSY .067 LARGER THAN NORMAL							
6110		CESSNA 421		MCAULY 3FF32C501		PISTON ROD ASSY D3474	WORN PROPELLER ASSY		5/1/96 EY2R9601502
		PROP ASSY PISTON ROD ASSY IS WORN							
6114		CESSNA 421		MCAULY 3AF34C92		HUB D7019C92	STRIPPED PROPELLER ASSY		4/1/96 EY2R9601480
		PROP ASSY HUB DOWEL PIN HOLE STUD STRIPPED							
6110		FRCHLD 24R46		HARTZL HC12V20*		COVER PLATE 127	BENT PROPELLER ASSY		7/1/96 EY2R9601581
		PROP ASSY COVER PLATE BENT							
6110		PIPER PA23150		HARTZL HC82VL2		SPRING 884	WORN PROPELLER ASSY		3/1/96 EY2R9601460
		PROP ASSY SPRING WORN							
6114		PIPER PA23150		HARTZL HC82VL2		HUB 84059	DAMAGED PROPELLER ASSY	5125 1111	5/1/96 EY2R9601507
		PROP HUB THREADS MISSING							
6110		PIPER PA30		HARTZL HCE2YL2		PITCH CHANGE ROD 24914S	WORN PROPELLER ASSY		5/1/96 EY2R9601525
		PROP ASSY PITCH CHANGE ROD WORN							
6114		PIPER PA31P		HARTZL HCC3YN		HUB 3276	DAMAGED PROPELLER ASSY		4/1/96 EY2R9601489
		PROP ASSY HUB DAMAGED							
6110		PIPER PA31T1		HARTZL HCB3TN3		LOW STOP COLLAR 30012	DAMAGED PROPELLER ASSY		7/1/96 EY2R9601585
		CARBON BLOCK CUT GROOVE IN BETA RING							

(End of DOMESTIC SERVICE DIFFICULTY REPORT SUMMARY - PROPELLERS)



INTERNATIONAL SERVICE DIFFICULTY REPORT



INTERNATIONAL SERVICE DIFFICULTY REPORT SUMMARY - AIRCRAFT**1/18/98 - 1/24/98 ISSUE: 98-04 ZAC-327**

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2432		AIRTRC AT301	PWA R1340AN1	HAMSTD 12D40	GILLBATT G88	CAP G172942	FAULTY BATTERY		10/31/97 AU971556
(AUS) BATTERY VENT CAP VULCANISED CLOSED. GAS BUILDUP CAUSED ACID TO VENT FROM AN ADJACENT CELL.									
2460		AIRTRC AT301	PWA R1340AN1	HAMSTD 12D40		CIRCUIT BREAKER	DEFECTIVE DC POWER DIST		11/28/97 AU971494
(AUS) CIRCUIT BREAKERS FAULTY.									
2460		AIRTRC AT301	PWA R1340AN1			CIRCUIT BREAKER	FAULTY DC POWER DIST		12/16/97 AU971559
(AUS) CIRCUIT BREAKERS FAULTY.									
2460		AIRTRC AT301	PWA R1340AN1	HAMSTD 22D40		CIRCUIT BREAKER	FAULTY DC POWER DIST		12/1/97 AU971495
(AUS) CIRCUIT BREAKERS FAULTY.									
2460		AIRTRC AT301	PWA R1340AN1	HAMSTD 12D40		CIRCUIT BREAKER	DEFECTIVE DC POWER DIST		10/25/97 AU971493
(AUS) ALL CIRCUIT BREAKERS FAILED TO MEET MANUFACTURERS REQUIREMENTS.									
3230		AMTR SEAREY	ROTAX ROTAX912			TORQUE TUBE	DISTORTED MLG		11/5/97 AU971491
(AUS) LANDING GEAR COLLAPSED. INVESTIGATION FOUND THAT THE LANDING GEAR TORQUE TUBE ASSEMBLY WAS TWISTED WHEN THE AIRCRAFT FELL OFF A STAND DURING ASSEMBLY. AIRCRAFT IS AMATEUR BUILT.									
2110		BEECH 200BEECH	PWA PT6A41	HARTZL HCB3TN3	1131325	BEARING	SEIZED CABIN AIR COMP		9/24/97 AU971550
(AUS) AIRCONDITIONER BELT SNAPPED. INVESTIGATION FOUND THAT THE AIRCONDITIONING COMPRESSOR WAS TIGHT TO TURN AND BINDING. THE ASSEMBLY WAS STRIPPED AND ONE THRUST BEARING WAS FOUND WELDED AND SEIZED.									
2612		BEECH 200BEECH	PWA PT6A42	HARTZL HCB3TN3		DIODE IN47	SHORTED FIRE DETECTION		12/2/97 AU971528
(AUS) FIRE AUDIO BOX DIODE SHORT CIRCUITED.									
2720		BEECH 200BEECH	PWA PT6A41	HARTZL HCB3TN3	1015241863	SPRING	FAULTY RUDDER CONTROL		11/26/97 AU971513
(AUS) RUDDER BOOST CABLE TENSION SPRING STRETCHED. INCORRECT TENSION ON THE CABLE ALLOWED THE RUDDER BOOST ACTUATOR ARM TO JAM UNDER THE LIP OF THE BULKHEAD. THE BULKHEAD WAS ALSO DAMAGED.									
3230		BEECH 200BEECH				LANDING GEAR	MALFUNCTION GEAR RETRACT SYS		12/16/97 AU971572
(AUS) AFTER TAKE-OFF THE LG WAS SELECTED UP AND VIBRATION AND NOISE WAS HEARD DURING RETRACTION WITH EXTENDED WINDING TIME - RED HANDLE UNSAFE LIGHT REMAINED ON WHEN GEAR APPEARED TO BE UP. GROUND INVESTIGATION COULD NOT REPRODUCE THE PROBLEM. GEAR MICROSWITCHES WERE CHECKED FOR ADJUSTMENT/WEAR, AND THE NLG DRIVE CHAIN AND SPROCKETS WERE ALSO INSPECTED.									
3260		BEECH B200C	PWA PT6A42			SWITCH 113646281	INTERMITTENT MLG POS		11/13/97 AU971516
(AUS) LANDING GEAR DOWNLOCK MICROSWITCH INTERMITTENT OPERATION.									

***** DENOTES SIGNIFICANT OCCURRENCE

INTERNATIONAL SERVICE DIFFICULTY REPORT SUMMARY - AIRCRAFT (cont'd)

1/18/98 To 1/24/98 ISSUE: 98-04 ZAC-327

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3520		BEECH B200C	PWA PT6A42			HOSE 1138495	FAILED PASSENGER OXYGEN		12/3/97 AU971563
(AUS) OXYGEN SYSTEM ON/OFF CONTROL CABLE FAILED. OXYGEN SYSTEM REMAINED ON FOR AN EXTENDED TIME CAUSING THE SUPPLY HOSE TO THE CASUALTY OXYGEN MASK TO RUPTURE AND ALLOWING THE OXYGEN SYSTEM TO DISCHARGE TO 0PSI.									
5610		BEECH B200C	PWA PT6A42			WINDSHIELD	BIRD STRIKE COCKPIT RT		11/8/97 AU971515
(AUS) BIRDSTRIKE ON RH WINDSCREEN. NIL DAMAGE.									
7333		BEECH 200BEECH			GULL 903800097	TRANSMITTER 849E	FAILED FUEL FLOW SENSOR		12/15/97 AU971573
(AUS) DURING FLIGHT THE LH ENGINE FUEL FLOW GAUGE REDUCED INDICATION FROM 550PPH TO 100PPH AND DIDN'T ALTER WITH POWER CHANGES. GROUND INVESTIGATION FOUND THE LH FUEL TRANSMITTER WAS FAULTY.									
7714		BEECH 200BEECH	PWA PT6A41			TACHOMETER A8266	DEFECTIVE ENGINE RPM IND		12/18/97 AU971578
(AUS) DURING AN INSPECTION OF A TURBINE TACHOMETER PRIOR TO TESTING,THE FRONT LENS WAS FOUND TO SHOW EVIDENCE OF MOISTURE CONTAMINATION (FOGGING). FURTHER INVESTIGATION FOUND THAT THE CASE HAD BEEN SEALED WITH RTV TYPE SEALANT AND NOT HERMETICALLY SOLDER SEALED. ON TESTING THE INSTRUMENT WAS FOUND TO HAVE EXCESSIVE FRICTION AND SCALE ERROR. FOUND IAW AD/INST/9. INCORRECT PROCEDURE/PERSONNEL ERROR.									
5341		BEECH A23	CONT IO346A			FRAME 16941318	MIS REPAIR WING ATTACH		11/27/97 AU971474
(AUS) FUSELAGE TO WING ATTACHMENT FRAME FILED OUT ON THE INSIDE RADIUS AND INCORRECT RIVET FITTED TO THE FORWARD WING MAIN SPAR SUPPORT. PERSONNEL/MAINTENANCE ERROR. UNAPPROVED PART/REPAIR.									
5512		BEECH A23	CONT IO346A			STABILIZER 169621661	INCORRECT MOD HORIZ STAB		11/27/97 AU971475
(AUS) STABILATOR INCORRECTLY MODIFIED IAW SI 1167. THE STABILISER HAD ONLY TWO INSPECTION PANELS FITTED TO THE UNDERSIDE INSTEAD OF THE FOUR STIPULATED IN SI 1167.									
5730		BEECH A23	CONT IO346A			PANEL 16911686	INCORRECT MOD WING INSP PANEL		11/27/97 AU971477
(AUS) WING INSPECTION PANELS INCORRECT SIZE. SI 0824-035 REV11 STIPULATES THE PANELS SHOULD BE 127MM (5IN) IN DIAMETER BUT THOSE FITTED ARE ONLY 100MM (4IN) DIAMETER MAKING ACCESS DIFFICULT.									
3411		BEECH F33A	CONT IO520B	MCAULY 3A32C76		FILTER RA1JA7	CRACKED DIRECTIONAL GYRO		11/27/97 AU971486
(AUS) INLINE PRESSURE FILTER TO DIR GYRO CRACKED AND LEAKING.									
3710		BEECH F33A	CONT IO520BA	MCAULY 2A36C23		FILTER RAIJ47	CRACKED VACUUM DIST SYS		12/9/97 AU971525
(AUS) VACUUM SYSTEM CLEAR INLINE PRESSURE FILTER CRACKED AROUND JOINT.									
7100		BEECH 35C33	CONT IO470K	MCAULY 2A36C23		HOSE	FAULTY POWERPLANT SYS		11/21/97 AU971466
(AUS) ALL FLUID HOSES IN ENGINE COMPARTMENT NOT PROTECTED BY FIRE SLEEVES. PERSONNEL/MAINTENANCE ERROR.									
5730		BEECH A36	CONT IO520BA	MCAULY 2A36C23	BEECH E3052	RIVET E352	DAMAGED LT RT WING SKIN		11/14/97 AU971469
(AUS) LH AND RH WING UPPER SKIN ATTACHMENT RIVETS SANDED TO A DEGREE WHEREBY UP TO 2/3 OF THE RADIUS MATERIAL HAS BEEN REMOVED. THE SANDING HAS ALSO REMOVED ALODINE SURFACE TREATMENT FROM THE UPPER WING SURFACES.									

***** DENOTES SIGNIFICANT OCCURRENCE

INTERNATIONAL SERVICE DIFFICULTY REPORT SUMMARY - AIRCRAFT (cont'd)

1/18/98 To 1/24/98 ISSUE: 98-04 ZAC-327

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3233		BEECH 58		MCAULY 3AF32C512		ACTUATOR 35825944	BROKEN NLG		11/19/97 AU971431
(AUS) NOSE LANDING GEAR RETRACTION ACTUATOR AFT ATTACHMENT LUG BROKEN OFF.									
3260		BEECH 58	CONT IO520C			WIRE	BROKEN MLG POS	10552	11/11/97 AU971502
(AUS) NOSE LANDING GEAR INDICATOR ARM ACTUATING WIRE BROKEN.									
5210		BEECH 58		MCAULY 3AF32C512		HINGE 3541818	BROKEN PASS DOOR		12/5/97 AU971521
(AUS) MAIN CABIN DOOR UPPER FORWARD HINGE FRACTURED AT THE HINGE BOLT HOLE. SUSPECT INITIATED BY INTERGRANULAR CORROSION DUE TO DISSIMILAR METAL CONTACT.									
5522		BEECH 58	CONT IO520C		BEECH 96610006	SKIN 96616911112	CRACKED RT ELEV OUTB	6357	11/7/97 AU971548
(AUS) ELEVATOR SKIN OUTBOARD OF THE RH TRIM TAB FOUND WITH SMALL CRACK. WITH FIRM FORCE APPLIED TO THE TRAILING EDGE, THE CRACK OPENED UP TO 127MM (5IN) IN LENGTH. CLOSER INSPECTION REVEALED SEVERAL MORE CRACKS. CRACKING WAS INITIATED BY CORROSION. SUSPECT SKINS ARE MADE OF MAGNESIUM ALLOY.									
2701		BEECH 76				TORQUE TUBE 1695241879	SEPARATED PILOT CONTROL		11/28/97 AU971545
(AUS) PILOTS SIDE CONTROL COLUMN TORQUE TUBE BROKE OFF AT RIVETED JOINT DURING FLIGHT.									
2731		BNORM BN2A26	LYC IO540K1B5	HARTZL HCC2YK2		TRIM BOX	CRACKED ELEV TAB CONT		11/20/97 AU971447
(AUS) ELEVATOR TRIM BOX CRACKED.									
3250		BNORM BN2A26	LYC IO540K1B5	HARTZL HCC2YK2		RING NB4199	CRACKED NLG STEERING		11/20/97 AU971446
(AUS) NOSE WHEEL STEERING DRIVE RING CRACKED. FOUND DURING INSPECTION IAW SB 214 ISSUE 1.									
5410		BNORM BN2A26	LYC IO540K1B5	HARTZL HCC2YK2		WEB NB21843	CRACKED NAC LT & RT		11/20/97 AU971450
(AUS) NACELLE LH AND RH WEBS CRACKED. FOUND DURING INSPECTION IAW SB200.									
5410		BNORM BN2A26	LYC IO540K1B5	HARTZL HCC2YK2	NB203721	ANGLE NB23721	CRACKED LT NACELLE		11/20/97 AU971449
(AUS) LH NACELLE BOX ANGLE LOCATED FORWARD OF PNO NB-20-C-5677 CRACKED.									
5510		BNORM BN2A26	LYC IO540K1B5	HARTZL HCC2YK2		STABILIZER	CORRODED HORIZ STAB		11/20/97 AU971454
(AUS) HORIZONTAL STABILISER CORRODED.									
5520		BNORM BN2A26	LYC IO540K1B5	HARTZL HCC2YK2		ELEVATOR	CORRODED ELEV STRUCTURE		11/20/97 AU971453
(AUS) ELEVATOR CORRODED.									
5521		BNORM BN2A26	LYC IO540K1B5	HARTZL HCC2YK2		RIB NB3151	CRACKED ELEVATOR		11/20/97 AU971448
(AUS) ELEVATOR RIB CRACKED. LOOSE AND MISSING RIVETS.									

***** DENOTES SIGNIFICANT OCCURRENCE

INTERNATIONAL SERVICE DIFFICULTY REPORT SUMMARY - AIRCRAFT (cont'd)

1/18/98 To 1/24/98 ISSUE: 98-04 ZAC-327

ATA OPER	REG. NO SERIAL NO	ACFT MAKE ACFT MODEL	ENG MAKE ENG MDL	PROP MAKE PROP MDL	COMP MFG COMP MDL	PART NAME PART NUMBER	PART COND PART LOC.	TT TSO	DIFF. DATE OPER CONT NO
5711		BNORM BN2A26				SPAR	CRACKED WING		12/22/97 AU971580
(AUS) WING SPAR HAS CRACKS RANGING FROM 12.7MM (0.5IN) TO OVER 25.4MM (1IN). FOUND IAW PBN SB 237.									
5720		BNORM BN2A26	LYC IO540K1B5	HARTZL HCC2YK2		FLAP SHROUD	CORRODED LT RT WING		11/20/97 AU971445
(AUS) LH AND RH WINGS CONTAINED CORROSION IN AREAS OF FLAP SHROUDS AND REAR BAYS.									
5102		CAMRON A315				GIMBLE	DAMAGED BALLOON BURNER		6/1/97 AU970816
(AUS) BALLOON BURNER GIMBLE BLOCK DAMAGED - SUSPECT CAUSED BY UNAUTHORIZED DISASSEMBLY AND ASSEMBLY BY UNQUALIFIED PERSONNEL -PERSONNEL/MAINTENANCE ERROR - UNAPPROVED MAINTENANCE									
2810		CESSNA 150M				VALVE 7161246	FAILED FUEL VENT		11/17/97 AU971579
(AUS) ENGINE STOPPED DURING CRUISE. INVESTIGATION FOUND A RESTRICTION (AN INSECT) IN THE LH FUEL TANK VENT TUBE. ALSO, THE VENT TUBE VALVE WAS 'STICKY'.									
5541		CESSNA 172RG	LYC O360F1A6	MCAULY B2D34C220		SPAR 5331513	CRACKED RUDDER		2/19/97 AU971378
(AUS) RUDDER SPAR CRACKED ADJACENT TO TOP HINGE POINT.									
3230		CESSNA 177RG	LYC IO360A1B6	MCAULY B2D34C207		PAD 24136	MISSING LANDING GEAR		10/17/97 AU971389
(AUS) LANDING GEAR PADS MISSING. PADS ARE VULCANISED/BONDED TO A STEEL SHELL. CORROSION APPEARS TO HAVE SPREAD BETWEEN THE PAD AND THE SHELL CAUSING DELAMINATION.									
3230		CESSNA 177RG	LYC IO360A1B6	MCAULY B2D34C207		PIN MS16555354	DISTORTED MLG DWNLOCK		10/17/97 AU971390
(AUS) LANDING GEAR DOWNLOCK PINS BENT DUE TO DEFECTIVE PADS (SEE MDR97/1389). WHEN THE DAMAGED PINS WERE REMOVED AND COMPARED TO THE REPLACEMENT ITEMS THEY APPEARED TO BE MANUFACTURED FROM A SOFTER MATERIAL (AN5 BOLTS). PERSONNEL/MAINTENANCE ERROR.									
7922		CESSNA 177RG	LYC IO360A1B6	MCAULY B2D34C207	LYC	VALVE 75944	DAMAGED THERMO BYPASS		10/17/97 AU971391
(AUS) ENGINE OIL COOLER BYPASS VALVE (VERNATHERM) FACE BADLY SCORED FROM CONTACT WITH VALVE SEAT WHICH WAS ALSO DAMAGED. FOUND DURING INSPECTION IAW AD/LYC/78 AMDT5 WHICH WAS OVERDUE BY SEVERAL HUNDRED HOURS. PERSONNAL/MAINTENANCE ERROR.									
2810		CESSNA 182H	CONT O470R	MCAULY 2A34C66		FUEL SYSTEM	CONTAMINATED FUEL STORAGE		10/26/97 AU971434
(AUS) FUEL SYSTEM CONTAMINATED BY WATER. ENGINE FAILURE RESULTED IN FORCED LANDING.									
3211		CESSNA 182A	CONT O470L			SUPPORT 5411212	CRACKED MLG		9/26/97 AU971397
(AUS) LANDING GEAR SUPPORT CRACKED.									
5312		CESSNA 182P		MCAULY 2A34C203		BULKHEAD 713683	CRACKED LT DOOR POST		10/17/97 AU971371
(AUS) FORWARD DOOR POST BULKHEAD CRACKED IN RELIEF NOTCH ON LH SIDE. AIRCRAFT IS USED FOR PARACHUTING OPERATIONS.									

***** DENOTES SIGNIFICANT OCCURRENCE

INTERNATIONAL SERVICE DIFFICULTY REPORT SUMMARY - AIRCRAFT (cont'd)

1/18/98 To 1/24/98 ISSUE: 98-04 ZAC-327

ATA OPER	REG. NO SERIAL NO	ACFT MAKE ACFT MODEL	ENG MAKE ENG MDL	PROP MAKE PROP MDL	COMP MFG COMP MDL	PART NAME PART NUMBER	PART COND PART LOC.	TT TSO	DIFF. DATE OPER CONT NO
5312		CESSNA 182Q	CONT O470R	MCAULY 2A34C203		BULKHEAD 713683	CRACKED DOOR POST		2/10/97 AU971218
(AUS) FUSELAGE DOOR POST BULKHEAD CRACKED IN AREA OF STRESS RELIEF NOTCH. CRACK LENGTH 3.175MM (0.125IN). FOUND DURING INVESTIGATION IAW AD/180/75 AMDT1.									
2436		CESSNA U206G	CONT IO520F	MCAULY D3A32C90		REGULATOR DGR3	FAILED DC GEN SYS		6/30/97 AU971274
(AUS) REGULATOR (20FF) FAILED DUE TO SHORT CIRCUIT. SUSPECT CAUSED BY FAULTY ALTERNATOR.									
3246		CESSNA 210N				BOLT AN547	FAILED NLG ATTACH		11/29/97 AU971517
(AUS) NOSE WHEEL ATTACHMENT BOLT FAILED. WHEEL TWISTED IN NLG FORK. SUSPECT BROKEN BOLT.									
3213		CESSNA 310R	CONT IO520M	MCAULY 3AF32C87		TORQUE LINK 514159	SEPARATED LT MLG		11/16/97 AU971519
(AUS) LH MAIN LANDING GEAR TORQUE LINK SEPARATED AT THE CENTRE HINGEPOINT. THE CENTRE HINGE BOLT COMPLETE WITH NUT, SPLIT PIN, BUSHES AND WASHERS PULLED THROUGH THE LOWER TORQUE LINK. SUSPECT CAUSED BY WORN BUSHES AND/OR IMPROPER SHIMMING OF THE CENTRE HINGE POINT.									
3260		CESSNA 310R	CONT IO520M	MCAULY 3AF32C87		WIRE	BROKEN LT MLG POS		10/7/97 AU971433
(AUS) LH MAIN LANDING GEAR DOWNLOCK MICROSWITCH WIRE BROKEN.									
3260		CESSNA 310R	CONT IO520M	MCAULY 3AF32C87		SWITCH ISET3	FAULTY RT MLG DWNLOCK		3/14/97 AU971272
(AUS) RH MAIN LANDING GEAR DOWNLOCK MICROSWITCH AND WIRING DETERIORATED DUE TO AGE. FURTHER INVESTIGATION FOUND THE RH MLG DOWNLOCK SYSTEM INCORRECTLY WIRED.									
3260		CESSNA 310R	CONT IO520M	MCAULY 3AF32C87		SWITCH 1SE13	BROKEN RT MLG DWNLOCK		11/27/97 AU971473
(AUS) RH MAIN LANDING GEAR DOWNLOCK MICROSWITCH LEVER BROKEN OFF.									
2933		CESSNA 402C	CONT TSIO520VB	MCAULY 3AF32C505		SIGHT GLASS	DAMAGED HYD QUANTITY		9/30/97 AU971399
(AUS) RH HYDRAULIC RESERVOIR SIGHT TUBE SPLIT AND LEAKING FLUID UNDER PRESSURE. HYDRAULIC CONTROL VALVE ALSO FOUND TO BE UNSERVICEABLE.									
3222		CESSNA 402B		MCAULY 3AF32C87		FORK 5452112	FAILED NLG FORK FITTING		11/24/97 AU971457
(AUS) NOSE LANDING GEAR FORK END FITTINGS CRACKED. NLG FAILED TO LOCK DOWN.									
3231		CESSNA 402B		MCAULY 3AF32C87		BELLCRANK 84116	CRACKED MLG RT DOOR		9/15/97 AU971387
(AUS) RH MAIN LANDING GEAR DOOR IDLER BELLCRANK BROKEN. FURTHER INVESTIGATION FOUND THE LH IDLER BELLCRANK CRACKED IN THE SAMEAREA.									
3260		CESSNA 404CESSNA		MCAULY 3FF32C501		WIRE	BROKEN LT MLG POS		11/12/97 AU971435
(AUS) LH MAIN LANDING GEAR DOWNLOCK MICROSWITCH EARTH WIRE (NO4) BROKEN AT TERMINAL.									
2910		CESSNA 441		HARTZL HCB3TN5		PIPE	LEAKING HYD MAIN SYS		12/17/97 AU971562
(AUS) HYDRAULIC PIPE LEAKING IN AREA OF HYDRAULIC PACK.									

***** DENOTES SIGNIFICANT OCCURRENCE

INTERNATIONAL SERVICE DIFFICULTY REPORT SUMMARY - AIRCRAFT (cont'd)

1/18/98 To 1/24/98 ISSUE: 98-04 ZAC-327

ATA OPER	REG. NO SERIAL NO	ACFT MAKE ACFT MODEL	ENG MAKE ENG MDL	PROP MAKE PROP MDL	COMP MFG COMP MDL	PART NAME PART NUMBER	PART COND PART LOC.	TT TSO	DIFF. DATE OPER CONT NO
5210		CESSNA 441		HARTZL HCB3TN5		HOOK 239425413	BROKEN CABIN DOOR UPPER		11/26/97 AU971509
(AUS) CABIN DOOR UPPER HOOK BROKEN.									
3213		CESSNA 550	PWA JT15D4		CESSNA 6541000003	SLEEVE 5541397	BROKEN LT MLG OLEO		11/14/97 AU971549
(AUS) LH OLEO WOULD NOT EXTEND AFTER TAKE-OFF PREVENTING LANDING GEAR RETRACTION. LATER THE OLEO EXTENDED ALLOWING GEAR RETRACTION. THE OLEO WAS DISASSEMBLED AND SPACER PNO 5541208-1 WAS FOUND JAMMED INSIDE OF A BROKEN BEARING LOWER SLEEVE PNO 5541309-7.									
5246		CESSNA 550				DOOR 65523121	SEPARATED FLUID SERVICE		12/10/97 AU971544
(AUS) LH ENGINE OIL ACCESS DOOR MISSING. CREW HAD REPORTED NOISE DURING FLIGHT									
5712		DHAV DHC1TMK10	LYC IO360A1A			RIB C1W317A1	CRACKED RT WING		11/20/97 AU971523
(AUS) RH WING ROOT RIB CRACKED IN AREA OF FLAP CABLE PULLEY ATTACHMENT.									
5343		MUDRY CAP10B	LYC AEIO360B2F	HOFMAN HO29HM180		FITTING	CRACKED LT RT FWD ATTACH		11/20/97 AU971482
(AUS) LH AND RH FORWARD UNDERCARRIAGE ATTACHMENT BLOCKS CRACKED. FOUND DURING INSPECTION IAW SB15 2(B).									
2710		PARTEN P68B	LYC IO360A1B6	HARTZL HCC2YK2		CABLE 6852195	FRAYED AILERON CONTROL		11/3/97 AU971407
(AUS) LH AILERON BALANCE CABLE STRANDS BROKEN. FOUND DURING INSPECTION IAW AD/P68/44 (PARTENAVIA SB 75 REV3).									
2710		PARTEN P68B	LYC IO360A1B6	HARTZL HCC2YK2		CABLE 6852193	FRAYED AILERON CONTROL		11/3/97 AU971403
(AUS) LH OUTBOARD AILERON CABLE STRANDS BROKEN. FOUND DURING INSPECTION IAW AD/P68/44 (PARTENAVIA SB 75 REV3).									
2710		PARTEN P68B	LYC IO360A1B6	HARTZL HCC2YK2		CABLE 6852193	FRAYED AILERON CONTROL		11/3/97 AU971406
(AUS) RH AILERON OUTBOARD CONTROL CABLE STRANDS BROKEN. FOUND DURING INSPECTION IAW AD/P68/44 (PARTENAVIA SB 75 REV3).									
2710		PARTEN P68B	LYC IO360A1B6	HARTZL HCC2YK2		CABLE 6852196	FRAYED AILERON CONTROL		11/3/97 AU971408
(AUS) RH AILERON BALANCE CABLE STRANDS BROKEN. FOUND DURING INSPECTION IAW AD/P68/44 (PARTENAVIA SB 75 REV3).									
2730		PARTEN P68B	LYC IO360A1B6	HARTZL HCC2YK2		CABLE 6853211	FRAYED ELEVATOR CONTROL		11/3/97 AU971409
(AUS) RH FORWARD ELEVATOR CABLE STRANDS BROKEN. FOUND DURING INSPECTION IAW AD/P68/44 (PARTENAVIA SB 75 REV3).									
2750		PARTEN P68B	LYC IO360A1B6	HARTZL HCC2YK2		CABLE 6855312	FRAYED TE FLAP CONTROL		11/3/97 AU971410
(AUS) RH FLAP CABLE STRANDS BROKEN. FOUND DURING INSPECTION IAW AD/P68/44 (PARTENAVIA SB 75 REV3).									
7120		PARTEN P68B				BRACKET	CRACKED ENGINE MOUNT		12/18/97 AU971570
(AUS) ENGINE MOUNT TO WING ATTACHMENT BRACKETS (3OFF) WERE FOUND CRACKED: 1. LH LOWER INBOARD PNO 68-1.2027, 2. RH UPPER INBOARD PNO 68-1.2025-1 AND 3. RH UPPER OUTBOARD PNO 68-1.2025-3. FOUND IAW AD/P68/28A3, SECTION 3.									

***** DENOTES SIGNIFICANT OCCURRENCE

INTERNATIONAL SERVICE DIFFICULTY REPORT SUMMARY - AIRCRAFT (cont'd)

1/18/98 To 1/24/98 ISSUE: 98-04 ZAC-327

ATA OPER	REG. NO SERIAL NO	ACFT MAKE ACFT MODEL	ENG MAKE ENG MDL	PROP MAKE PROP MDL	COMP MFG COMP MDL	PART NAME PART NUMBER	PART COND PART LOC.	TT TSO	DIFF. DATE OPER CONT NO
7160		PIPER PA60600	LYC IO540K1J5			DOOR 31317	SEPARATED ENGINE AIR INT		6/10/97 AU971120
(AUS) ENGINE ALTERNATE AIR DOOR SEPARATED FROM INDUCTION AIR BOX ASSEMBLY AND JAMMED THE THROTTLE BUTTERFLY									
3411		PIPER J3	CONT A75*	MCAULY 1A103TCM		LINE	DISCONNECTED PITOT/STATIC SYS		11/26/97 AU971489
(AUS) STATIC LINE DISCONNECTED AT REAR OF ASI. PERSONNEL/MAINTENANCE ERROR.									
3213		PIPER PA28151	LYC O320D3G	SNSNCH 74DM		CYLINDER 653194	CRACKED MLG		9/18/97 AU971405
(AUS) MAIN LANDING GEAR CYLINDER CRACKED IN TORQUE LINK ATTACHMENTPOINTS.									
5513		PIPER PA28235	LYC O540B2B5	HARTZL HCC2YK1	PIPER	TRIM TAB 63585	CRACKED HORIZ STAB		11/24/97 AU971465
(AUS) STABILATOR TRIM TABS CRACKED AT INBOARD END ADJACENT TO THE ACTUATING ARM ATTACHMENT. CRACKING EVIDENT IN SKIN PANELS AND INBOARD RIB.									
7820		PIPER PA28161	LYC O320D3G	SNSNCH 74DM		MUFFLER 668943	CRACKED ENGINE		11/10/97 AU971498
(AUS) MUFFLER BAFFLE FAILED, PARTIALLY BLOCKING THE MUFFLER OUTLET.									
7920		PIPER PA28180	LYC O360A3A	SNSNCH 76EM8		HOSE 338	DETERIORATED ENG OIL DIST		11/6/97 AU971488
(AUS) OIL COOLER HOSES (2OFF) FAULTY. OIL SEEPING THROUGH FIRE SLEEVE.									
2710		PIPER PA31350				CABLE 246317	BROKEN LT AIL CONTROL		12/15/97 AU971565
(AUS) DURING TAXI AFTER LANDING, THE AILERON CONTROLS ROLLED LEFT AND DIDN'T ROLL BACK WITH RUDDER INPUT. AILERONS STILL HAD FULL AND FREE MOVEMENT BUT WITH A BIAS OF SLIGHT SPRING PRESSURE TO THE LEFT CONTROL DOWN. INVESTIGATION FOUND THE LH AILERON/RUDDER INTER-CONNECT CABLE HAD BROKEN.									
2810		PIPER PA31350		HARTZL HCE3YR2		CAP 99321	SEPARATED FUEL STORAGE		12/1/97 AU971520
(AUS) RH OUTBOARD FUEL CAP SEPARATED FROM TANK. INVESTIGATION FOUND THAT THE CAP WAS STILL LOCKED INTO THE ADAPTER RING WHICH HAD SEPARATED FROM THE FILLER HOLE DUE TO THE LOCKING TABS ON THE ADAPTER NOT ENGAGING IN THE FILLER SLOT HOLES ALLOWING THE ADAPTER TO ROTATE AND COME LOOSE. FURTHER INSPECTION OF THE OTHER FUEL CAPS FOUND THE RH INBOARD CAP ADAPTER LOCKING TABS NOT ENGAGED.									
3232		PIPER PA31350		HARTZL HCE3YR2	OZONE	SPRING 756265	BROKEN LT MLG DOOR		11/6/97 AU971393
(AUS) LH MAIN LANDING GEAR DOOR ACTUATOR SPRING BROKEN.									
5520		PIPER PA31350		HARTZL HCE3YR2		HINGE 7172	CRACKED ELEVATOR		10/11/97 AU971417
(AUS) LH ELEVATOR OUTBOARD HINGE CRACKED AND RIVET SHEARED.									
7110		PIPER PA31	LYC TIO540A1A	HARTZL HCE3YR2		COWLING	DEPARTED ENGINE COWLING		11/10/97 AU971414
(AUS) LH ENGINE COWLING SEPARATED FROM AIRCRAFT IN FLIGHT. THE TOP COWL WAS JAMMED ON THE LEADING EDGE OF THE OUTBOARD WING BY THESLIPSTREAM WHILE THE BOTTOM COWL WAS LOST. THIS WAS THE FIRST FLIGHT AFTER THE COWLS WERE REMOVED TO CARRY OUT AD/PHZL/60 A4. SUSPECT THAT THE COWLS WERE NOT CORRECTLY SECURED AFTER MAINTENANCE. PERSONNEL/MAINTENANCE ERROR.									

***** DENOTES SIGNIFICANT OCCURRENCE

INTERNATIONAL SERVICE DIFFICULTY REPORT SUMMARY - AIRCRAFT (cont'd)

1/18/98 To 1/24/98 ISSUE: 98-04 ZAC-327

ATA OPER	REG. NO SERIAL NO	ACFT MAKE ACFT MODEL	ENG MAKE ENG MDL	PROP MAKE PROP MDL	COMP MFG COMP MDL	PART NAME PART NUMBER	PART COND PART LOC.	TT TSO	DIFF. DATE OPER CONT NO
7120		PIPER	LYC	HARTZL		MOUNT	CRACKED		12/3/97
		PA31350	TIO540J2BD	HCE3YR2		7679	ENGINE MOUNT SEC		AU971575
		(AUS) RH LOWER O/B ENGINE MOUNT CRACKED AT THE TURBOCHARGER MOUNT HOLE.							
7120		PIPER	LYC	HARTZL		MOUNT	CRACKED		12/3/97
		PA31350	TIO540J2BD	HCE3YR2		12A1997	ENGINE MOUNT		AU971574
		(AUS) LH LOWER I/B ENGINE MOUNT CRACKED AT THE TURBOCHARGER MOUNT HOLE.							
7922		PIPER	LYC			VALVE	FAULTY		11/13/97
		PA31	TIO540A2C			53E22144	OIL BYPASS		AU971538
		(AUS) ENGINE OIL TEMPERATURE VALVE FAULTY.							
7922		PIPER	LYC	HARTZL		VALVE	FAULTY		11/14/97
		PA31	TIO540A1B	HCE3YR2		53E22144	ENG OIL TEMP		AU971529
		(AUS) ENGINE OIL COOLER BYPASS VALVE FAULTY.							
(End of INTERNATIONAL SERVICE DIFFICULTY REPORT SUMMARY - AIRCRAFT)									

INTERNATIONAL SERVICE DIFFICULTY REPORT SUMMARY - HELICOPTERS**1/18/98 - 1/24/98 ISSUE: 98-04 ZAC-327**

ATA OPER	REG. NO SERIAL NO	ACFT MAKE ACFT MODEL	ENG MAKE ENG MDL	PROP MAKE PROP MDL	COMP MFG COMP MDL	PART NAME PART NUMBER	PART COND PART LOC.	TT TSO	DIFF. DATE OPER CONT NO
5210		AEROSP AS355F1	ALLSN 250C20F			FITTING 35A2512682	CRACKED PASS DOOR		10/12/97 AU971526
(AUS) RH SLIDING DOOR REAR ROLLER MOUNT CRACKED AND BROKEN. WHEN THE DOOR WAS OPENED THE DOOR ATTEMPTED TO SEPARATE FROM THE AIRCRAFT BUT WAS HELD IN PLACE BY A PASSENGER.									
7240		AEROSP AS355F1	ALLSN 250C20F			HEAT SHIELD 6894	CRACKED NR 1 ENGINE		10/28/97 AU971377
(AUS) NO1 ENGINE HEAT SHIELD CRACKED.									
5350		AEROSP SA365C	TMECA ARRIEL1A			FAIRING 365A231424	CRACKED FUSELAGE		6/13/97 AU970776
(AUS) CONNECTING FAIRING CRACKED									
5313		BELL 206L	ALLSN 250C30P			FITTING 263132914	CRACKED AFT FUSELAGE		9/21/97 AU971392
(AUS) AFT FUSELAGE LONGERON FITTING CRACKED.									
7210		BELL 212	PWA PT6T3B		PWA	COMBINING GRBOX CPGB147	MAKING METAL NR 1 ENGINE		11/29/97 AU971567
(AUS) NO1 ENGINE CHIP ILLUMINATION DURING CLIMB. INVESTIGATION FOUND METAL FROM THE COMBINING GEARBOX TO BE OUTSIDE OF MANUFACTURERS LIMITS.									
5345		BELL 412	PWA PT6T3B			FITTING 4124181	CRACKED HOIST BEAM		11/15/97 AU971527
(AUS) HOIST BEAM ATTACHMENT FITTING CRACKED.									
6710		BELL 412	PWA PT6T3B		BELL	BOLT 25743H	INCORRECT PART M/R CONTROL		11/17/97 AU971456
(AUS) COLLECTIVE LEVER ASSEMBLY PIN PNO 412-010-422-103 FALLEN OUT. THE PIN IS LOCATED ON THE TRANSMISSION CASING. BOLT PNO 20-057-4-3H AND WASHER PNO AN460-416 WAS ATTACHED TO THE PIN WITH LOCKWIRE. INVESTIGATION FOUND THAT THE BOLT PNO 20-057-4-3H WAS THE INCORRECT PART, THE CORRECT PART NUMBER WAS PNO NAS6604H5 WHICH IS 3.175MM (0.125IN) LONGER. THE REMAINING COLLECTIVE LEVER PIN ALLOWED THE COLLECTIVE LEVER PNO 412-010-401-109 TO BE MISALIGNED RESULTING IN THE LEVER RUBBING ON THE MAIN ROTOR MAST.PERSONNEL/MAINTENANCE ERROR. UNAPPROVED PART.									
7210		BELL 412	PWA PT6T3B			COMBINING GRBOX CP6B2254	MAKING METAL TURBINE ENGINE		11/2/97 2056 AU971423
(AUS) ENGINE COMBINING GEARBOX METAL CONTAMINATION. SUSPECT CAUSED BY DETERIORATION OF BEARING CAGE.									
6322		BELL 47G3B	LYC TVO435D1B		BELL 47	COOLING FAN 47661297	CORRODED ROTORCRAFT		11/8/97 359 AU971398
(AUS) COOLING FAN CORRODED. TWO ADJACENT BLADES BROKEN OFF. BROKEN BLADES CUT THROUGH THE VOLTAGE REGULATOR COVER AND IMPACTED THE REGULATOR COOLING FINS. THEY THEN TRAVELLED DOWNWARDS, DAMAGING THE FUEL GAUGE LINE BEFORE COMING TO REST ON THE TAIL ROTOR CONTROL CABLES.									
6710		BELL 47G3B1	LYC VO435A1F			BEARING KSP4	WORN MAIN ROTOR CONTR		5/23/97 AU971113
(AUS) COLLECTIVE LEVER FORWARD BEARING WORN. PERSONNEL/MAINTENANCE ERROR.									
8120		BELL 47G3B	LYC TVO435D1A			TURBOCHARGER 466115	FAILED EXH TURBO		8/13/97 AU971468
(AUS) ENGINE TURBOCHARGER FAILED. INVESTIGATION FOUND THAT THE EXHAUST TURBINE HAD BEEN SKIDDING ON THE REAR THRUST FACE.									

***** DENOTES SIGNIFICANT OCCURRENCE

INTERNATIONAL SERVICE DIFFICULTY REPORT SUMMARY - HELICOPTERS (cont'd)

1/18/98 To 1/24/98 ISSUE: 98-04 ZAC-327

ATA OPER	REG. NO SERIAL NO	ACFT MAKE ACFT MODEL	ENG MAKE ENG MDL	PROP MAKE PROP MDL	COMP MFG COMP MDL	PART NAME PART NUMBER	PART COND PART LOC.	TT TSO	DIFF. DATE OPER CONT NO
8530		BELL 47J2A	LYC TVO435B1A			VALVE SEAT	SEPARATED ENG NR 4 CYL EXH	11/18/97 160	AU971467
(AUS) NO4 CYLINDER EXHAUST VALVE SEAT SEPARATED FROM CYLINDER. NO2 CYLINDER EXHAUST VALVE AND VALVE GUIDE UNSERVICEABLE. NO2 CYLINDER HEAD EXTENSIVELY CRACKED.									
6220		HILLER UH12E	LYC VO540C2A		HILLER	PIN 51452	CRACKED MAIN ROTOR HEAD	11/7/97	AU971422
(AUS) MAIN ROTOR HEAD TENSION/TORSION PIN CRACKED.									
6310		HUGHES 269C	LYC HIO360D1A			HUB 269A546	MIS INSTALLED ENG-TRANS	10/31/97	AU971478
(AUS) ENGINE TO TRANSMISSION UPPER CLUTCH HUB INSTALLED THE WRONG WAY AROUND. BEARING SEAT SHOULDER SHEARED OFF. PERSONNEL/MAINTENANCE ERROR.									
6310		HUGHES 269C	LYC HIO360D1A			PULLEY 269A5582	WORN ENG-TRANS	10/31/97	AU971481
(AUS) DRIVE BELT IDLER PULLEY HAD THE ANODIZED COATING WORN THROUGH IN ALL GROOVES.									
7112		HUGHES 269C	LYC HIO360D1A			SCROLL 269A853311	FAILED ENG AIR BAFFLE	10/31/97	AU971480
(AUS) ENGINE SCROLL ASSEMBLY LOWER MOUNT SEPARATED. UPPER RH BRACKET PNO 269A8597 WAS ALSO FOUND TO BE UNSERVICEABLE. THE SCROLL WAS FOULING ON THE IMPELLER.									
7160		HUGHES 269C	LYC HIO360D1A			VALVE 269A81523	ILLEGAL MOD ENGINE AIR INT	10/30/97	AU971476
(AUS) INTAKE ALTERNATE AIR VALVE ILLEGALLY MODIFIED. THE VALVE WAS SEALED CLOSED WITH SEALANT AND A PLASTIC OIL BOTTLE WAS GLUED OVER THE TOP. PERSONNEL/MAINTENANCE ERROR. UNAPPROVED MODIFICATION.									
5311		ROBSIN R22BETA	LYC O320B2C			FRAME A22	CRACKED FUSELAGE UPPER	11/14/97	AU971430
(AUS) FUSELAGE UPPER FRAME CRACKED IN WELD IN AREA DESCRIBED IN AD/R22/41 A1.									
5311		ROBSIN R22BETA	LYC O320B2C			FRAME A22	CRACKED FUSELAGE	10/22/97	AU971388
(AUS) FUSELAGE FRAME CRACKED. AIRCRAFT IS USED IN MUSTERING OPERATIONS.									
5311		ROBSIN R22BETA				FRAME A22	MIS REPAIR TAILBOOM UPPER	11/17/97	AU971432
(AUS) REPLACEMENT FUSELAGE UPPER FRAME CONTAINED UNAUTHORISED WELD REPAIR IN THE AREA OF THE TAIL BOOM ATTACHMENT. UNAPPROVED REPAIR. PERSONNEL/MAINTENANCE ERROR.									
5311		ROBSIN R22MARINER	LYC O320B2C		ROBSIN	FRAME A22	CRACKED RT MLG GRBOX MT	6/24/97 1088	AU971484
(AUS) FUSELAGE UPPER FRAME TUBE FROM RH REAR MAIN GEARBOX MOUNT PAD TO THE RH DECK BOLT CRACKED THROUGH WELD UNDER THE GEARBOX MOUNT PAD.									
2913		SNIAS AS350D	ALLSN 250C30		AEROSP 704A3431006	DRIVE BELT 74A33694	LOOSE HYDRAULIC PUMP	10/18/97	AU971487
(AUS) HYDRAULIC PUMP DRIVE BELT LOOSE. SEE MDR 97/1319 FOR ADDITIONAL INFORMATION									

(End of INTERNATIONAL SERVICE DIFFICULTY REPORT SUMMARY - HELICOPTERS)

INTERNATIONAL SERVICE DIFFICULTY REPORT SUMMARY - ENGINES**1/18/98 - 1/24/98 ISSUE: 98-04 ZAC-327**

ATA OPER	REG. NO SERIAL NO	ACFT MAKE ACFT MODEL	ENG MAKE ENG MDL	PROP MAKE PROP MDL	COMP MFG COMP MDL	PART NAME PART NUMBER	PART COND PART LOC.	TT TSO	DIFF. DATE OPER CONT NO
7240		AEROSP AS355F1	ALLSN 250C20F			HEAT SHIELD 6894	CRACKED NR 1 ENGINE		10/28/97 AU971377
(AUS) NO1 ENGINE HEAT SHIELD CRACKED.									
7200		AYRES S2RT15NORMAL	PWA PT6A15AG	HARTZL HCB3TN3	PWA	ENGINE PCE1434	FAILED POWER SECT		12/30/97 AU971582
(AUS) ENGINE SUFFERED COMPLETE FAILURE DURING CRUISE - CAUSE UNKNOWN AT THIS STAGE.									
7414		BEECH A23	CONT IO346A		BENDIX 201205	COIL 13571651	FAILED ENG MAG		11/27/97 AU971479
(AUS) LH AND RH MAGNETO COILS BREAKING DOWN. MAGNETO LEADS ALSO FAULTY.									
8520		BEECH A36	CONT IO520BA	MCAULY 3A32C76		CRANKSHAFT 649896	BROKEN ENGINE		11/27/97 323 AU971547
(AUS) ENGINE CRANKSHAFT BROKEN.									
8520		BEECH 95C55	CONT IO520C	MCAULY 3AF32C75		BOLT 641931175	BROKEN ENG NR 6 CYL		11/3/97 AU971536
(AUS) LH NO6 CYLINDER UPPER THROUGH BOLT BROKEN IN LINE WITH THE CYLINDER BASE FLANGE.									
7210		BELL 212	PWA PT6T3B		PWA	COMBINING GRBOX CPGB147	MAKING METAL NR 1 ENGINE		11/29/97 AU971567
(AUS) NO1 ENGINE CHIP ILLUMINATION DURING CLIMB. INVESTIGATION FOUND METAL FROM THE COMBINING GEARBOX TO BE OUTSIDE OF MANUFACTURERS LIMITS.									
7210		BELL 412	PWA PT6T3B			COMBINING GRBOX CP6B2254	MAKING METAL TURBINE ENGINE		11/2/97 2056 AU971423
(AUS) ENGINE COMBINING GEARBOX METAL CONTAMINATION. SUSPECT CAUSED BY DETERIORATION OF BEARING CAGE.									
8530		BELL 47J2A	LYC TVO435B1A			VALVE SEAT	SEPARATED ENG NR 4 CYL EXH		11/18/97 160 AU971467
(AUS) NO4 CYLINDER EXHAUST VALVE SEAT SEPARATED FROM CYLINDER. NO2 CYLINDER EXHAUST VALVE AND VALVE GUIDE UNSERVICEABLE. NO2 CYLINDER HEAD EXTENSIVELY CRACKED.									
8530		BNORM BN2B26	LYC O540E4B5	HARTZL HCC2YK2		VALVE SEAT JT162	SEPARATED ENG EXHAUST		7/21/97 2021 AU971541
(AUS) EXHAUST VALVE SEAT SEPARATED FROM CYLINDER HEAD.									
8530		CESSNA 150G	CONT O200A			VALVE 641917A12	STICKING NR 4 CYL EXH		11/22/97 518 AU971518
(AUS) NO4 CYLINDER EXHAUST VALVE STUCK OPEN. LOSS OF POWER AND ROUGH RUNNING RESULTED IN A FORCED LANDING IN THE BUSH.									
8530		CESSNA 152	LYC O235L2C		LYC LW16703	PUSHROD 7386P	LOOSE NR 2 CYL EXH		12/21/97 AU971569
(AUS) PILOT REPORTED REDUCTION IN RPM AND ROUGH RUNNING IN FLIGHT. INVESTIGATION FOUND THE NO2 CYLINDER EXHAUST PUSHROD END FITTINGS WERE LOOSE, WITH ONE END OF THE PUSHROD SPLAYED AND CRACKED.									

INTERNATIONAL SERVICE DIFFICULTY REPORT SUMMARY - ENGINES (cont'd)

1/18/98 To 1/24/98 ISSUE: 98-04 ZAC-327

ATA OPER	REG. NO SERIAL NO	ACFT MAKE ACFT MODEL	ENG MAKE ENG MDL	PROP MAKE PROP MDL	COMP MFG COMP MDL	PART NAME PART NUMBER	PART COND PART LOC.	TT TSO	DIFF. DATE OPER CONT NO
7414		CESSNA 175A	CONT GO300A		SLICK 667	COIL M173	CRACKED ENG RT MAGNETO	25	12/22/97 AU971581
(AUS) AFTER APPROXIMATELY 45 MINUTES FLIGHT TIME AND DURING POSTLANDING CHECKS, THE RH MAGNETO WAS SHOWING A 'DEAD CUT'. THEMAGNETO WAS SUBSEQUENTLY REMOVED AND DISMANTLED, AND THE COIL WAS FOUND TO BE SPLIT OPEN AND LEAKING.									
7310		CESSNA 404CESSNA	CONT GTSIO520M	MCAULY 3FF32C501		PIPE 641486	CRACKED LT ENG FUEL DIST		10/27/97 AU971429
(AUS) LH ENGINE FUEL INJECTOR PIPE BETWEEN MANIFOLD AND INJECTOR CRACKED IN AREA WHERE NIPPLE IS BRAZED TO THE INJECTOR LINE.									
8530		DHAV DHC3	PWA R134059	HAMSTD 23D40		VALVE 71167	LEAKING NR 2 CYL EXH	979	11/3/97 AU971394
(AUS) NO2 CYLINDER EXHAUST VALVE LEAKING.									
7322		DHAVXX DH82AROBRTSN	DHAVXX GIPSYMAJOR1		A148HIM	PIN CH14583	MISSING FUEL CONTROL		12/7/97 AU971531
(AUS) TAPER PIN ON SECURING THROTTLE LEVER PNO CH46158 TO THE THROTTLE SPINDLE PNO CH14470 MISSING. THIS ALLOWED THE THROTTLE LEVER TO MOVE WITHOUT MOVING THE THROTTLE BUTTERFLY.									
8530		GULSTM 500S	LYC IO540E1B5			CYLINDER 7619	INCORRECT ASSY LT RT ENGINE		11/7/97 AU971507
(AUS) RH ENGINE CONTAINED THREE CYLINDERS WITH INCORRECT BARREL/PISTON RING COMBINATION. LH ENGINE HAD ONE CYLINDER WITH INCORRECT RINGS. THE AFFECTED CYLINDERS WERE CHROMED CYLINDERS(CERMICROME) BUT DURING THE PREVIOUS ASSEMBLY WERE MISTAKEN FOR NITRIDED CYLINDERS AND FITTED WITH THE APPROPRIATE PISTON RINGS FOR THAT TYPE CYLINDER. PERSONNEL/MAINTENANCE ERROR.									
7230		PILATS PC6BH2	PWA PT6A20	HARTZL HCB3TN3		BOLT MS97147	BROKEN COMP TURBINE		9/24/97 AU971374
(AUS) COMPRESSOR TURBINE VANE BOLTS (3OFF) HAD THE BOLT HEADS SEPARATE AND BECOME TRAPPED BETWEEN THE VANE AND TURBINE DISC CAUSING DAMAGE TO THE DISC IN THE AREA OF THE FIR TREE AND THE VANE.SUSPECT BOLTS WERE NOT REPLACED DURING THE LAST REPAIR WHICH WAS FOR AN ENGINE OVERTEMP.									
8500		PIPER PA25235	LYC O540B2C5	MCAULY 1A200FA	LYC	ENGINE L181964A	FAILED LT MAG DRIVE	1999	11/18/97 AU971472
(AUS) ENGINE STOPPED. INITIAL INVESTIGATION FOUND THE LH MAGNETO DRIVE GEAR TO BE DAMAGED AND THE SUPPORT BEARING FAILED. ROTATING THE PROPELLER DID NOT CAUSE THE REAR CASE GEAR TRAIN TO OPERATE.									
8530		PIPER PA28151	LYC O320E2D		LYC	VALVE 74541	FAILED ENG NR 3 CYL EXH	1664	9/25/97 AU971418
(AUS) NO3 CYLINDER EXHAUST VALVE HEAD HAD APPROXIMATELY 30% MISSING.DAMAGE CAUSED TO THE TOP OF THE PISTON.									
8520		PIPER PA31350	LYC TIO540J2BD	HARTZL HCE3YR2	LYC	CRANKCASE L789661A	CRACKED ENGINE		11/17/97 AU971455
(AUS) ENGINE CRANKCASE CRACKED. INVESTIGATION FOLLOWING ENGINE STRIP FOUND TWO DAMAGED CAM FOLLOWERS.									
8530		PIPER PA31P	LYC TIGO541E1A			CYLINDER LW13561	CRACKED INLET VALVE SEAT	1017	6/20/97 AU971332
(AUS) ENGINE CYLINDER CRACKED FROM INDUCTION TUBE FACE TOWARDS THE INLET VALVE SEAT. CRACK LENGTH 31.75MM (1.25IN)									
8530		PIPER PA31P	LYC TIGO541E1A			CYLINDER LW13561	CRACKED INLET VALVE SEAT	1379	5/2/97 AU971333
(AUS) ENGINE CYLINDER CRACKED FROM INDUCTION TUBE MOUNT FACE TOWARDSTHE INLET VALVE SEAT. CRACK LENGTH 25.4MM (1IN).									

(End of INTERNATIONAL SERVICE DIFFICULTY REPORT SUMMARY - ENGINES)

***** DENOTES SIGNIFICANT OCCURRENCE

INTERNATIONAL SERVICE DIFFICULTY REPORT SUMMARY - COMPONENTS**1/18/98 - 1/24/98 ISSUE: 98-04 ZAC-327**

ATA OPER	REG. NO SERIAL NO	ACFT MAKE ACFT MODEL	ENG MAKE ENG MDL	PROP MAKE PROP MDL	COMP MFG COMP MDL	PART NAME PART NUMBER	PART COND PART LOC.	TT TSO	DIFF. DATE OPER CONT NO
3424		AIRTRC AT301	PWA R1340AN1	HAMSTD 22D40		INDICATOR 1394T15Y	DEFECTIVE TURN & BANK		12/2/97 AU971496
(AUS) TURN AND SLIP INDICATOR FAULTY. WHITE PAINT BEHIND SLIP BALL IS CRAZED AND FLAKING. ON/OFF FLAG IS PUSHED BACK ONTO TURN AND SLIP INDICATOR. INSTRUMENT FAILED AD/INST8 AMDT3.									
2310		BEECH 200BEECH	PWA PT6A41	HARTZL HCB3TN3		TRANSCIVER KHA95	FAULTY HF COMM		5/1/97 AU971458
(AUS) HF RADIO SCRATCHY AND WEAK ON TRANSMIT.									
3457		CESSNA 340CESSNA	CONT TSIO520K	MCAULY D2AF34C71	KING KC555	GPS SYSTEM	FAULTY GLOBAL POSIT		11/24/97 AU971459
(AUS) GPS INTERFACE TO HSI AND AIRDATA SYSTEM FAULTY ALLOWING AIRCRAFT TO WANDER IN AUTOPILOT NAV MODE.									
2350		CESSNA 404CESSNA		MCAULY 3FF32C501		SWITCH 61433	FAILED PILOT PTT		10/12/97 AU971428
(AUS) PILOTS PTT SWITCH LOCATED ON LH CONTROL WHEEL FAILED INTERNALLY IN THE TRANSMIT MODE									
(End of INTERNATIONAL SERVICE DIFFICULTY REPORT SUMMARY - COMPONENTS)									

ATA OPER	REG. NO SERIAL NO	ACFT MAKE ACFT MODEL	ENG MAKE ENG MDL	PROP MAKE PROP MDL	COMP MFG COMP MDL	PART NAME PART NUMBER	PART COND PART LOC.	TT TSO	DIFF. DATE OPER CONT NO
6114		CHILD	LYC	HARTZL	HARTZL	BOLT	BROKEN		12/17/97
		S2APITTS	AEIO360B4A	HCC2YK4		A2433	PROP HUB		AU971568
		(AUS) WHEN THE PROPELLER WAS REMOVED DUE TO EXCESSIVE GREASE LEAKAGE AT THE BLADE BUTTS, THE THREADED END OF ONE HUB CLAMPING BOLT WAS FOUND TO BE MISSING.							
6111		GULSTM	LYC	HARTZL		BLADE	CRACKED		10/7/97
		680FLP	IO720B1B	HCA3VK2			PROPELLER	473	AU971386
		(AUS) PROPELLER BLADE CRACKED. CRACK ORIGINATED FROM A NICK IN THE BLADE LOCATED APPROXIMATELY 76.2MM (3IN) FROM THE BLADE TIP.CRACK LENGTH 12.7MM (0.5IN). SUSPECT THE CRACK WAS INITIATED BY A PIECE OF METAL WIRE WHICH WAS FOUND IN THE BLADE DURING DRESSING OUT OF THE CRACK.							
(End of INTERNATIONAL SERVICE DIFFICULTY REPORT SUMMARY - PROPELLERS)									



U.S. Department
of Transportation
**Federal Aviation
Administration**

SERVICE DIFFICULTY REPORT SUMMARY

GENERAL AVIATION - INDEX



The following information provides a tally of the Service Difficulty Reports (SDR's) contained in this weeks issue of the General Aviation SDR Summary. The totals represent only a summation of the SDR's that were submitted to the FAA, Aviation Data Systems Branch, AFS-620, and processed in time for inclusion in the Summary. The first table is a tally of the number of SDR's submitted through the indicated Flight Standards District Office (FSDO). The second table sorts the SDR's by the aircraft or equipment make and model. The heading at the top of each table provides a two digit Joint Aircraft System/Component (JASC) code grouping (e.g., JASC codes 1100 thru 1800 are represented by the heading labeled 11-18) which categorizes in general, the problem areas for each reported discrepancy.

The Flight Standards Service Difficulty Program objective is to achieve prompt and appropriate correction of conditions adversely affecting continued airworthiness of aeronautical products. This is accomplished by the collection of Service Difficulty and Malfunction or Defect Reports. SDR's are consolidation and collation into common data base where they are analyzed for trends, problems, and alert information. This information is then disseminated to the appropriate segments of the aviation community and to other FAA offices.

The number of SDR's submitted is not an indicator of the mechanical reliability or fitness of an air carrier's aircraft fleet and should not be used as such. The air carriers certificate holding office has the primary responsibility for planning, programming evaluations, and assessing the performance of operators. Questions regarding an air carrier's fleet performance should be directed to the appropriate Flight Standards District Office, Certificate Management Office, or Certificate Management Unit.

GENERAL AVIATION SUMMARY INDEX BY DISTRICT OFFICE**1/18/98 To 1/24/98 ISSUE: 98-04 ZAC-327**

DISTRICT OFFICE		SDR TOTALS BY FAA ATA SYSTEM CHAPTER								TOTAL
		11-18	21-29	30-38	45-49	51-57	61-67	71-79	80-85	
AL	01	0	0	0	0	0	0	1	0	1
AU	S	0	26	26	0	32	8	24	14	130
CE	07	0	1	0	0	0	0	0	1	2
CE	09	0	0	1	0	0	0	0	0	1
EA	13	0	1	0	0	0	1	1	0	3
EA	21	0	0	0	0	0	1	0	1	2
FS	01	0	0	1	0	0	2	1	0	4
GL	03	0	0	0	0	0	48	0	0	48
GL	09	0	0	1	0	0	0	0	0	1
GL	23	0	1	0	0	0	0	0	0	1
GL	25	0	0	0	0	1	0	0	0	1
NE	01	0	0	0	0	0	0	0	1	1
NM	09	0	0	0	0	0	0	1	0	1
NM	11	0	0	0	0	2	0	0	0	2
SO	03	0	0	1	0	0	0	0	0	1
SO	05	0	1	0	0	0	0	0	0	1
SW	03	0	22	21	0	3	67	22	0	135
SW	05	0	5	2	0	0	6	5	0	18
SW	99	0	0	1	0	0	0	0	0	1
WP	05	0	0	0	0	0	0	0	1	1
TOTALS		0	57	54	0	38	133	55	18	355

(End of GENERAL AVIATION SUMMARY INDEX by DISTRICT OFFICE Report)

GENERAL AVIATION SUMMARY INDEX by MANUFACTURER MAKE and MODEL**1/18/98 To 1/24/98 ISSUE: 98-04 ZAC-327**

AIRCRAFT MAKE	AIRCRAFT MODEL	SDR TOTALS BY FAA ATA SYSTEM CHAPTER								TOTAL
		11-18	21-29	30-38	45-49	51-57	61-67	71-79	80-85	
AEROSP	AS355F	0	0	0	0	0	2	0	0	2
AEROSP	AS355F1	0	0	0	0	1	0	1	0	2
AEROSP	SA315B	0	0	0	0	0	1	0	0	1
AEROSP	SA365C	0	0	0	0	1	0	0	0	1
AIRTRC	AT301	0	5	1	0	0	0	0	0	6
AMTR	SEAREY	0	0	1	0	0	0	0	0	1
AYRES	S2RT15NORMAL	0	0	0	0	0	0	1	0	1
BEECH	100BEECH	0	0	0	0	0	5	0	0	5
BEECH	18S	0	0	0	0	0	1	0	0	1
BEECH	200BEECH	0	0	1	0	0	0	0	0	1
BEECH	200BEECH	0	4	1	0	0	1	2	0	8
BEECH	200CBEECH	0	1	0	0	0	0	0	0	1
BEECH	35C33	0	0	0	0	0	0	1	0	1
BEECH	58	0	0	2	0	2	0	0	0	4
BEECH	76	0	1	0	0	0	0	0	0	1
BEECH	95B55	0	0	0	0	0	1	0	0	1
BEECH	95C55	0	0	0	0	0	0	0	1	1
BEECH	A23	0	0	0	0	3	0	1	0	4
BEECH	A36	0	0	0	0	1	0	0	1	2
BEECH	B200C	0	0	2	0	1	0	0	0	3
BEECH	C90	0	0	0	0	0	1	0	0	1
BEECH	D55	0	0	0	0	0	1	0	0	1
BEECH	F33A	0	0	2	0	0	0	0	0	2
BELL	206B	0	1	0	0	0	1	1	0	3
BELL	206B3	0	1	0	0	0	0	1	0	2
BELL	206B3	0	0	0	0	0	1	0	0	1
BELL	206L	0	0	0	0	1	0	0	0	1

AIRCRAFT MAKE	AIRCRAFT MODEL	SDR TOTALS BY FAA ATA SYSTEM CHAPTER								TOTAL
		11-18	21-29	30-38	45-49	51-57	61-67	71-79	80-85	
BELL	206L1	0	0	4	0	0	6	5	0	15
BELL	206L1	0	0	0	0	0	10	0	0	10
BELL	206L3	0	1	1	0	1	3	4	0	10
BELL	206L3	0	0	0	0	0	4	0	0	4
BELL	212	0	2	1	0	0	0	0	0	3
BELL	212	0	0	1	0	0	1	2	0	4
BELL	214ST	0	5	1	0	1	0	1	0	8
BELL	222	0	1	0	0	0	0	0	0	1
BELL	222U	0	0	0	0	0	0	1	0	1
BELL	230	0	1	0	0	0	3	0	0	4
BELL	407	0	0	0	0	0	1	1	0	2
BELL	407	0	0	0	0	0	13	0	0	13
BELL	412	0	2	5	0	1	9	5	0	22
BELL	412	0	0	0	0	1	1	1	0	3
BELL	47G3B	0	0	0	0	0	1	0	1	2
BELL	47G3B1	0	0	0	0	0	1	0	0	1
BELL	47J2A	0	0	0	0	0	0	0	1	1
BNORM	BN2A26	0	1	1	0	7	0	0	0	9
BNORM	BN2A3	0	0	0	0	0	1	0	0	1
BNORM	BN2B26	0	0	0	0	0	0	0	1	1
BOLKMS	BK117A3	0	0	0	0	0	1	0	0	1
BOLKMS	BK117A3	0	1	1	0	0	0	3	0	5
BOLKMS	BK117B1	0	1	0	0	0	0	0	0	1
BOLKMS	BK117B1	0	1	0	0	0	2	1	0	4
BOLKMS	BK117B2	0	0	0	0	0	1	0	0	1
BOLKMS	BK117C1	0	1	1	0	0	1	0	0	3
BOLKMS	BO105S	0	4	3	0	0	8	2	0	17

AIRCRAFT MAKE	AIRCRAFT MODEL	SDR TOTALS BY FAA ATA SYSTEM CHAPTER								TOTAL
		11-18	21-29	30-38	45-49	51-57	61-67	71-79	80-85	
BOLKMS	BO105S	0	0	0	0	0	0	1	0	1
CAMRON	A315	0	0	0	0	1	0	0	0	1
CESSNA	150G	0	0	0	0	0	0	0	1	1
CESSNA	150M	0	1	0	0	0	0	0	0	1
CESSNA	152	0	0	0	0	0	0	0	2	2
CESSNA	172	0	0	0	0	0	1	0	0	1
CESSNA	172RG	0	0	0	0	1	1	0	0	2
CESSNA	175	0	0	0	0	0	0	0	1	1
CESSNA	175A	0	0	0	0	0	0	1	0	1
CESSNA	177	0	0	0	0	0	1	0	0	1
CESSNA	177RG	0	0	2	0	0	0	1	0	3
CESSNA	182	0	0	0	0	0	2	0	0	2
CESSNA	182A	0	0	1	0	0	0	0	0	1
CESSNA	182H	0	1	0	0	0	0	0	0	1
CESSNA	182P	0	1	0	0	1	0	0	0	2
CESSNA	182Q	0	0	0	0	1	0	0	0	1
CESSNA	208	0	0	0	0	0	2	0	0	2
CESSNA	208B	0	0	1	0	0	0	0	0	1
CESSNA	210	0	0	0	0	0	1	0	0	1
CESSNA	210M	0	0	0	0	0	1	0	0	1
CESSNA	210N	0	0	1	0	0	0	0	0	1
CESSNA	310	0	0	1	0	0	3	0	0	4
CESSNA	310L	0	0	0	0	0	1	0	0	1
CESSNA	310Q	0	0	0	0	0	1	0	0	1
CESSNA	310R	0	0	4	0	0	3	0	0	7
CESSNA	340CESSNA	0	0	1	0	0	1	0	0	2
CESSNA	402B	0	0	2	0	0	3	0	0	5

AIRCRAFT MAKE	AIRCRAFT MODEL	SDR TOTALS BY FAA ATA SYSTEM CHAPTER								TOTAL
		11-18	21-29	30-38	45-49	51-57	61-67	71-79	80-85	
CESSNA	402C	0	1	0	0	0	0	0	0	1
CESSNA	404CESSNA	0	1	1	0	0	0	1	0	3
CESSNA	414	0	0	0	0	0	1	0	0	1
CESSNA	414A	0	1	0	0	0	0	0	0	1
CESSNA	421	0	0	0	0	0	3	0	0	3
CESSNA	441	0	1	0	0	1	0	0	0	2
CESSNA	550	0	0	1	0	1	0	0	0	2
CESSNA	A185F	0	0	1	0	0	0	0	0	1
CESSNA	P206A	0	0	0	0	0	1	0	0	1
CESSNA	P206B	0	0	0	0	0	2	0	0	2
CESSNA	T210N	0	0	0	0	0	1	0	0	1
CESSNA	T303	0	0	0	0	0	2	0	0	2
CESSNA	U206G	0	1	0	0	0	0	0	0	1
CHILD	S2APITTS	0	0	0	0	0	1	0	0	1
DHAV	DHC1TMK10	0	0	0	0	1	0	0	0	1
DHAV	DHC3	0	0	0	0	0	0	0	1	1
DHAVXX	DH82AROBRTSN	0	0	0	0	0	0	1	0	1
EMB	EMB110P1	0	1	0	0	0	0	0	0	1
FRCHLD	24R46	0	0	0	0	0	1	0	0	1
GULSTM	500S	0	0	0	0	0	0	0	1	1
GULSTM	680FLP	0	0	0	0	0	1	0	0	1
GULSTM	690B	0	0	0	0	0	1	0	0	1
HILLER	UH12E	0	0	0	0	0	1	0	0	1
HUGHES	269C	0	0	1	0	0	0	0	0	1
HUGHES	269C	0	0	0	0	0	2	2	0	4
MTSBSI	MU2B60	0	0	0	0	1	0	0	0	1
MUDRY	CAP10B	0	0	0	0	1	0	0	0	1

AIRCRAFT MAKE	AIRCRAFT MODEL	SDR TOTALS BY FAA ATA SYSTEM CHAPTER								TOTAL
		11-18	21-29	30-38	45-49	51-57	61-67	71-79	80-85	
PARTEN	P68B	0	6	0	0	0	0	1	0	7
PILATS	PC6BH2	0	0	0	0	0	0	1	0	1
PIPER	J3	0	0	1	0	0	0	0	0	1
PIPER	PA23150	0	0	0	0	0	2	0	0	2
PIPER	PA25235	0	0	0	0	0	0	0	1	1
PIPER	PA28151	0	0	1	0	0	0	0	1	2
PIPER	PA28161	0	0	0	0	0	0	1	1	2
PIPER	PA28180	0	0	0	0	0	0	1	0	1
PIPER	PA28235	0	0	0	0	1	0	0	0	1
PIPER	PA30	0	0	0	0	0	1	0	0	1
PIPER	PA31	0	0	0	0	0	0	3	0	3
PIPER	PA31350	0	0	0	0	0	0	0	1	1
PIPER	PA31350	0	2	1	0	1	0	4	1	9
PIPER	PA31P	0	0	0	0	0	1	0	2	3
PIPER	PA31T1	0	0	0	0	0	1	0	0	1
PIPER	PA34200	0	0	0	0	2	0	0	0	2
PIPER	PA42	0	0	1	0	0	0	0	0	1
PIPER	PA60600	0	0	0	0	0	0	1	0	1
ROBSIN	R22BETA	0	0	0	0	3	0	0	0	3
ROBSIN	R22MARINER	0	0	0	0	1	0	0	0	1
SKRSKY	S76	0	1	0	0	0	1	0	0	2
SKRSKY	S76A	0	4	4	0	0	3	1	0	12
SKRSKY	S76A	0	0	0	0	0	4	1	0	5
SNIAS	AS350D	0	1	0	0	0	0	0	0	1
TOTALS		0	57	54	0	38	133	55	18	355

(End of AIR CARRIER SUMMARY INDEX by OPERATOR Report)

JOINT AIRCRAFT SYSTEM/COMPONENT CODE TABLE

PREFACE

The Joint Aircraft System/Component (JASC) Code Table is a modified version of the Air Transport Association of America (ATA), Specification 100 code. It was developed by the Federal Aviation Administration's (FAA), Aviation Data Systems Branch (AFS-620). Technical support was provided by the Galaxy Scientific Corporation, and various representatives of the air carrier and general aviation community.

Over the past four years, the JASC format of the ATA Spec 100 code has gained widespread industry acceptance. In a harmonized effort, the FAA's counterparts in Australia and Canada have adopted the JASC code with only a few exceptions. Some Canadian aircraft manufacturers have also recently adopted this new standard.

This code table is constructed by using the new JASC four (4) digit code, along with an abbreviated code title. The abbreviated titles have been modified in some cases to clarify the intended use of the accompanying code. This table can be used as a quick reference chart, to assist in the coding and review of aircraft structures or systems data (i.e., Service Difficulty Report (SDR), Accident/Incident Report).

The current coding scheme used in the JASC code was introduced in May 1991, for the technical classification of SDR's. Its predecessor, the FAA aircraft system/component code, was a similar but more complex eight-digit code which was developed over 25 years ago. It was constructed around the computer technology of that period. It consisted of a four digit numerical code plus a four alpha character code to make data retrieval possible. Since that time, computer technology has advanced many fold. Reducing the code from eight to four characters simplifies coding, and in some cases, makes JASC coding match the ATA Specification 100 first three digits, which are used to identify aircraft systems. The ATA code does not reference the fourth digit, so it is free to be used for identifying components.

The JASC code aircraft structural section has increased due to problems inherent with aging aircraft. As an example, FAA code 5301 SXBD was expanded to 20 items due to the high rate of reporting in this area (8021 structural reports were received in 1989). In some instances, there was very little reporting and codes were combined into other systems if the safety impact was not significant. The overall reduction in codes has been from 568 FAA codes to 488 JASC codes, with the significant increase being in the structural area as stated earlier.

The JASC code divides the engine section into two major code groups to separate the turbine and reciprocating engines. The codes for the turbine engines are in JASC Chapter 72, Turbine/Turboprop Engine. The codes for the reciprocating engines are now exclusively found in JASC Chapter 85, Reciprocating Engine.

The other major deviation from ATA Spec 100 is in ATA section 2730, specifically involves the stall warning system. Early technology (primarily on smaller aircraft) directly linked the sensing of flight attitude to one of the components which furnished the means of manually controlling the flight attitude characteristics (elevator). Today, most large transport category aircraft utilize electronic units to sense the change in the environmental condition called stall, and use the data to influence navigation. ATA section 3410, Flight Environment Data, includes high speed warning in its code definition. Stall warning (low speed) is the reciprocal term of high speed warning, so its filing under the same code appears more logical. Thus, with the JASC code it was decided to move the stall warning system to Chapter 34 under the separate code JASC code 3418, Stall Warning System.

The FAA is continuing to pursue worldwide involvement from operators and manufacturers in addressing the need for international standardization of aircraft system/component codes. The ultimate goal is to develop a universal aircraft/component numbering standard which can be used in the manufacturer's maintenance manual, wiring diagram manual, system manuals and illustrated parts catalog. This harmonized standard must be a usable standard for the aircraft manufacturers, air carrier operators and the general aviation community.

We welcome comments and feedback regarding the possible forming of working groups to achieve this long range consideration of possibly harmonizing the ATA Specification 100 code and the JASC code. Comments may be directed to the FAA, Aviation Data Sytem Branch, AFS-620, P.O. Box 25082, Oklahoma City, OK 73125.

JOINT AIRCRAFT SYSTEM/COMPONENT CODE TABLE

JASC/ TITLE

11 PLACARDS AND MARKINGS

1100 PLACARDS AND MARKINGS

12 SERVICING

1210 FUEL SERVICING
1220 OIL SERVICING
1230 HYDRAULIC FLUID SERVICING
1240 COOLANT SERVICING

18 HELICOPTER VIBRATION

1800 HELICOPTER VIB/NOISE ANALYSIS
1810 HELICOPTER VIBRATION ANALYSIS
1820 HELICOPTER NOISE ANALYSIS

21 AIR CONDITIONING

2100 AIR CONDITIONING SYSTEM
2110 CABIN COMPRESSOR SYSTEM
2120 AIR DISTRIBUTION SYSTEM
2121 AIR DISTRIBUTION FAN
2130 CABIN PRESSURE CONTROL SYSTEM
2131 CABIN PRESSURE CONTROLLER
2132 CABIN PRESSURE INDICATOR
2133 PRESSURE REGUL/OUTFLOW VALVE
2134 CABIN PRESSURE SENSOR
2140 HEATING SYSTEM
2150 CABIN COOLING SYSTEM
2160 CABIN TEMPERATURE CONTROL SYSTEM
2161 CABIN TEMPERATURE CONTROLLER
2162 CABIN TEMPERATURE INDICATOR
2163 CABIN TEMPERATURE SENSOR
2170 HUMIDITY CONTROL SYSTEM

22 AUTO FLIGHT

2200 AUTO FLIGHT SYSTEM
2210 AUTOPILOT SYSTEM
2211 AUTOPILOT COMPUTER
2212 ALTITUDE CONTROLLER
2213 FLIGHT CONTROLLER
2214 AUTOPILOT TRIM INDICATOR
2215 AUTOPILOT MAIN SERVO
2216 AUTOPILOT TRIM SERVO
2220 SPEED-ATTITUDE CORRECT. SYSTEM
2230 AUTO THROTTLE SYSTEM
2250 AERODYNAMIC LOAD ALLEVIATING

23 COMMUNICATIONS

2300 COMMUNICATIONS SYSTEM
2310 HF COMMUNICATION SYSTEM
2311 UHF COMMUNICATION SYSTEM
2312 VHF COMMUNICATION SYSTEM
2320 DATA TRANSMISSION AUTO CALL
2330 ENTERTAINMENT SYSTEM
2340 INTERPHONE & PA SYSTEM
2350 AUDIO INTEGRATING SYSTEM
2360 STATIC DISCHARGE SYSTEM
2370 AUDIO/VIDEO MONITORING

24 ELECTRICAL POWER

2400 ELECTRICAL POWER SYSTEM
2410 ALTERNATOR-GENERATOR DRIVE
2420 AC GENERATION SYSTEM
2421 AC GENERATOR-ALTERNATOR
2422 AC INVERTER
2423 PHASE ADAPTER

24 ELECTRICAL POWER CONT'D

2424 AC REGULATOR
2425 AC INDICATING SYSTEM
2430 DC GENERATING SYSTEM
2431 BATTERY OVERHEAT WARN. SYSTEM
2432 BATTERY/CHARGER SYSTEM
2433 DC RECTIFIER-CONVERTER
2434 DC GENERATOR-ALTERNATOR
2435 STARTER-GENERATOR
2436 DC REGULATOR
2437 DC INDICATING SYSTEM
2440 EXTERNAL POWER SYSTEM
2450 AC POWER DISTRIBUTION SYSTEM
2460 DC POWER/DISTRIBUTION SYSTEM

25 EQUIPMENT/FURNISHINGS

2500 CABIN EQUIPMENT/FURNISHINGS
2510 FLIGHT COMPARTMENT EQUIPMENT
2520 PASSENGER COMPARTMENT EQUIPMENT
2530 BUFFET/GALLEYS
2540 LAVATORIES
2550 CARGO COMPARTMENTS
2551 AGRICULTURAL SPRAY SYSTEM
2560 EMERGENCY EQUIPMENT
2561 LIFE JACKET
2562 EMERGENCY LOCATOR BEACON
2563 PARACHUTE
2564 LIFE RAFT
2565 ESCAPE SLIDE
2570 ACCESSORY COMPARTMENT
2571 BATTERY BOX STRUCTURE
2572 ELECTRONIC SHELF SECTION

26 FIRE PROTECTION

2600 FIRE PROTECTION SYSTEM
2610 DETECTION SYSTEM
2611 SMOKE DETECTION
2612 FIRE DETECTION
2613 OVERHEAT DETECTION
2620 EXTINGUISHING SYSTEM
2621 FIRE BOTTLE, FIXED
2622 FIRE BOTTLE, PORTABLE

27 FLIGHT CONTROLS

2700 FLIGHT CONTROL SYSTEM
2701 CONTROL COLUMN SECTION
2710 AILERON CONTROL SYSTEM
2711 AILERON TAB CONTROL SYSTEM
2720 RUDDER CONTROL SYSTEM
2721 RUDDER TAB CONTROL SYSTEM
2722 RUDDER ACTUATOR
2730 ELEVATOR CONTROL SYSTEM
2731 ELEVATOR TAB CONTROL SYSTEM
2740 STABILIZER CONTROL SYSTEM
2741 STABILIZER POSITION INDICATING
2742 STABILIZER ACTUATOR
2750 TE FLAP CONTROL SYSTEM
2751 TE FLAP POSITION IND. SYSTEM
2752 TE FLAP ACTUATOR
2760 DRAG CONTROL SYSTEM
2761 DRAG CONTROL ACTUATOR
2770 GUST LOCK/DAMPER SYSTEM
2780 LE FLAP CONTROL SYSTEM
2781 LE FLAP POSITION IND. SYSTEM
2782 LE FLAP ACTUATOR

28 FUEL

2800 AIRCRAFT FUEL SYSTEM
2810 FUEL STORAGE
2820 ACFT FUEL DISTRIB. SYSTEM
2821 ACFT FUEL FILTER/STRAINER
2822 FUEL BOOST PUMP
2823 FUEL SELECTOR/SHUTOFF VALVE
2824 FUEL TRANSFER VALVE
2830 FUEL DUMP SYSTEM
2840 ACFT FUEL INDICATING
2841 FUEL QUANTITY INDICATOR
2842 FUEL QUANTITY SENSOR
2843 FUEL TEMPERATURE INDICATING
2844 FUEL PRESSURE INDICATOR

29 HYDRAULIC POWER

2900 HYDRAULIC POWER SYSTEM
2910 HYDRAULIC, MAIN SYSTEM
2911 HYDRAULIC POWER-ACCUMULATOR-MAIN
2912 HYDRAULIC FILTER-MAIN SYSTEM
2913 HYDRAULIC PUMP. ELECT-ENG.-MAIN
2914 HYDRAULIC HANDPUMP-MAIN
2915 HYDRAULIC PRESSURE RELIEF VLV-MAIN
2916 HYDRAULIC RESERVOIR-MAIN
2917 HYDRAULIC PRESSURE REGULATOR-MAIN
2920 HYDRAULIC, AUXILIARY SYSTEM
2921 HYDRAULIC ACCUMULATOR-AUXILIARY
2922 HYDRAULIC FILTER-AUXILIARY
2923 HYDRAULIC PUMP-AUXILIARY
2925 HYDRAULIC PRESSURE RELIEF-AUXILIARY
2926 HYDRAULIC RESERVOIR-AUXILIARY
2927 HYDRAULIC PRESSURE REGULATOR-AUX.
2930 HYDRAULIC SYSTEM INDICATING
2931 HYDRAULIC PRESSURE INDICATOR
2932 HYDRAULIC PRESSURE SENSOR
2933 HYDRAULIC QUANTITY INDICATOR
2934 HYDRAULIC QUANTITY SENSOR

30 ICE AND RAIN PROTECTION

3000 ICE/RAIN PROTECTION SYSTEM
3010 AIRFOIL ANTI/DE-ICE SYSTEM
3020 AIR INTAKE ANTI/DE-ICE SYSTEM
3030 PITOT/STATIC ANTI-ICE SYSTEM
3040 WINDSHIELD/DOOR RAIN/ICE REMOVAL
3050 ANTENNA/RADOME ANTI-ICE/DE-ICE SYSTEM
3060 PROP/ROTOR ANTI-ICE/DE-ICE SYSTEM
3070 WATER LINE ANTI-ICE SYSTEM
3080 ICE DETECTION

31 INSTRUMENTS

3100 INDICATING/RECORDING SYSTEM
3110 INSTRUMENT PANEL
3120 INDEPENDENT INSTRUMENTS (CLOCK, ETC.)
3130 DATA RECORDERS (FLT/MAINT)
3140 CENTRAL COMPUTERS (EICAS)
3150 CENTRAL WARNING
3160 CENTRAL DISPLAY
3170 AUTOMATIC DATA

32 LANDING GEAR

3200 LANDING GEAR SYSTEM
3201 LANDING GEAR/WHEEL FAIRING
3210 MAIN LANDING GEAR
3211 MAIN LANDING GEAR ATTACH SECTION
3212 EMERGENCY FLOTATION SECTION
3213 MAIN LANDING GEAR STRUT/AXLE/TRUCK
3220 NOSE/TAIL LANDING GEAR
3221 NOSE/TAIL LANDING GEAR ATTACH SECTION
3222 NOSE/TAIL LANDING GEAR STRUT/AXLE
3230 LANDING GEAR RETRACT/EXT. SYSTEM
3231 LANDING GEAR DOOR RETRACT SECTION
3232 LANDING GEAR DOOR ACTUATOR
3233 LANDING GEAR ACTUATOR
3234 LANDING GEAR SELECTOR
3240 LANDING GEAR BRAKE SYSTEM
3241 BRAKE ANTI-SKID SECTION
3242 BRAKE
3243 MASTER CYL/BRAKE VALVE
3244 TIRE
3245 TIRE TUBE
3246 WHEEL/SKI/FLOAT
3250 LANDING GEAR STEERING SYSTEM
3251 STEERING UNIT
3252 SHIMMY DAMPER
3260 LANDING GEAR POSITION & WARNING
3270 AUXILIARY GEAR (TAIL SKID)

33 LIGHTS

3300 LIGHTING SYSTEM
3310 FLIGHT COMPARTMENT LIGHTING
3320 PASSENGER COMPARTMENT LIGHTING
3330 CARGO COMPARTMENT LIGHTING
3340 EXTERIOR LIGHTING
3350 EMERGENCY LIGHTING

34 NAVIGATION

3400 NAVIGATION SYSTEM
3410 FLIGHT ENVIRONMENT DATA
3411 PITOT/STATIC SYSTEM
3412 OUTSIDE AIR TEMP. IND./SENSOR
3413 RATE OF CLIMB INDICATOR
3414 AIRSPEED/MACH INDICATING
3415 HIGH SPEED WARNING
3416 ALTIMETER, BAROMETRIC/ENCODER

34 NAVIGATION CONT'D

3417 AIR DATA COMPUTER
3418 STALL WARNING SYSTEM
3420 ATTITUDE AND DIRECTION DATA SYSTEM
3421 ATTITUDE GYRO & IND. SYSTEM
3422 DIRECTIONAL GYRO & IND. SYSTEM
3423 MAGNETIC COMPASS
3424 TURN & BANK/RATE OF TURN INDICATOR
3425 INTEGRATED FLT. DIRECTOR SYSTEM
3430 LANDING & TAXI AIDS
3431 LOCALIZER/VOR SYSTEM
3432 GLIDE SLOPE SYSTEM
3433 MICROWAVE LANDING SYSTEM
3434 MARKER BEACON SYSTEM
3435 HEADS UP DISPLAY SYSTEM
3436 WIND SHEAR DETECTION SYSTEM
3440 INDEPENDENT POS. DETERMINING SYSTEM
3441 INERTIAL GUIDANCE SYSTEM
3442 WEATHER RADAR SYSTEM
3443 DOPPLER SYSTEM
3444 GROUND PROXIMITY SYSTEM
3445 AIR COLLISION AVOIDANCE SYSTEM (TCAS)
3446 NON RADAR WEATHER SYSTEM
3450 DEPENDENT POSITION DETERMINING SYSTEM
3451 DME/TACAN SYSTEM
3452 ATC TRANSPONDER SYSTEM
3453 LORAN SYSTEM
3454 VOR SYSTEM
3455 ADF SYSTEM
3456 OMEGA NAVIGATION SYSTEM
3457 GLOBAL POSITIONING SYSTEM
3460 FLIGHT MANAGE. COMPUTING SYSTEM

35 OXYGEN

3500 OXYGEN SYSTEM
3510 CREW OXYGEN SYSTEM
3520 PASSENGER OXYGEN SYSTEM
3530 PORTABLE OXYGEN SYSTEM

36 PNEUMATIC

3600 PNEUMATIC SYSTEM
3610 PNEUMATIC DISTRIBUTION SYSTEM
3620 PNEUMATIC INDICATING SYSTEM

37 VACUUM

3700 VACUUM SYSTEM
3710 VACUUM DISTRIBUTION SYSTEM
3720 VACUUM INDICATING SYSTEM

38 WATER/WASTE

3800 WATER & WASTE SYSTEM
3810 POTABLE WATER SYSTEM
3820 WASH WATER SYSTEM
3830 WASTE DISPOSAL SYSTEM
3840 AIR SUPPLY (WATER PRESS. SYSTEM)

45 CENTRAL MAINT. SYSTEM

4500 CENTRAL MAINT. COMPUTER

49 AIRBORNE AUXILIARY POWER

4900 AIRBORNE APU SYSTEM
4910 APU COWLING/CONTAINMENT
4920 APU CORE ENGINE
4930 APU ENGINE FUEL & CONTROL
4940 APU START/IGNITION SYSTEM
4950 APU BLEED AIR SYSTEM
4960 APU CONTROLS
4970 APU INDICATING SYSTEM
4980 APU EXHAUST SYSTEM
4990 APU OIL SYSTEM

51 STANDARD PRACTICES/STRUCTURES

5100 STANDARD PRACTICES/STRUCTURES
5101 AIRCRAFT STRUCTURES
5102 BALLOON REPORTS

52 DOORS

5200 DOORS
5210 PASSENGER/CREW DOORS
5220 EMERGENCY EXIT
5230 CARGO/BAGGAGE DOORS
5240 SERVICE DOORS
5241 GALLEY DOORS
5242 E/E COMPARTMENT DOORS
5243 HYDRAULIC COMPARTMENT DOORS
5244 ACCESSORY COMPARTMENT DOORS
5245 AIR CONDITIONING COMPART. DOORS
5246 FLUID SERVICE DOORS

5247 APU DOORS
5248 TAIL CONE DOORS
5250 FIXED INNER DOORS
5260 ENTRANCE STAIRS
5270 DOOR WARNING SYSTEM
5280 LANDING GEAR DOORS

53 FUSELAGE

5300 FUSELAGE STRUCTURE (GENERAL)
5301 AERIAL TOW EQUIPMENT
5302 ROTORCRAFT TAIL BOOM
5310 FUSELAGE MAIN STRUCTURE
5311 FUSELAGE MAIN FRAME
5312 FUSELAGE MAIN BULKHEAD
5313 FUSELAGE MAIN LONGERON/STRINGER
5314 FUSELAGE MAIN KEEL
5315 FUSELAGE MAIN FLOOR BEAM
5320 FUSELAGE MISCELLANEOUS STRUCTURE
5321 FUSELAGE FLOOR PANEL
5322 FUSELAGE INTERNAL MOUNT STRUCTURE
5323 FUSELAGE INTERNAL STAIRS
5324 FUSELAGE FIXED PARTITIONS
5330 FUSELAGE MAIN PLATE/SKIN
5340 FUSELAGE MAIN ATTACH FITTINGS
5341 WING ATTACH FITTINGS (ON FUSELAGE)
5342 STABILIZER ATTACH FITTINGS
5343 LANDING GEAR ATTACH FITTINGS
5344 FUSELAGE DOOR HINGES
5345 FUSELAGE EQUIPMENT ATTACH FITTINGS
5346 POWERPLANT ATTACH FITTINGS
5347 SEAT/CARGO ATTACH FITTINGS
5350 FUSELAGE AERODYNAMIC FAIRINGS

54 NACELLES/PYLONS

5400 NACELLE/PYLON STRUCTURE
5410 MAIN FRAME (ON NACELLE/PYLON)
5411 FRAME/SPAR/RIB(NACELLE/PYLON)
5412 BULKHEAD/FIREWALL (NAC/PYLON)
5413 LONGERON/STRINGER (NAC/PYLON)
5414 PLATE SKIN (NAC/PYLONS)
5415 ATTACH FITTINGS (NAC/PYLON)

55 STABILIZERS

5500 EMPENNAGE STRUCTURE
5510 HORIZONTAL STABILIZER STRUCTURE
5511 HORIZONTAL STABILIZER SPAR/RIB
5512 HORIZONTAL STABILIZER PLATE/SKIN
5513 HORIZONTAL STABILIZER TAB STRUCTURE
5520 ELEVATOR STRUCTURE

55 STABILIZERS CONT'D

5521 ELEVATOR SPAR/RIB STRUCTURE
5522 ELEVATOR PLATES/SKIN STRUCTURE
5523 ELEVATOR TAB STRUCTURE
5530 VERTICAL STABILIZER STRUCTURE
5531 VERTICAL STABILIZER SPAR/RIB STRUCTURE
5532 VERTICAL STABILIZER PLATES/SKIN
5533 VENTRAL STRUCTURE (ON VERT. STAB)
5540 RUDDER STRUCTURE
5541 RUDDER SPAR/RIB STRUCTURE
5542 RUDDER PLATE/SKIN STRUCTURE
5543 RUDDER TAB STRUCTURE
5550 EMPENNAGE FLT. CONT. ATTACH FITTING
5551 HORIZONTAL STABILIZER ATTACH FITTING
5552 ELEVATOR/TAB ATTACH FITTINGS
5553 VERT. STAB. ATTACH FITTINGS
5554 RUDDER/TAB ATTACH FITTINGS

56 WINDOWS

5600 WINDOW/WINDSHIELD SYSTEM
5610 FLIGHT COMPARTMENT WINDOWS
5620 PASSENGER COMPARTMENT WINDOWS
5630 DOOR WINDOWS
5640 INSPECTION WINDOWS

57 WINGS

5700 WING STRUCTURE
5710 WING MAIN FRAME STRUCTURE
5711 WING SPAR STRUCTURE
5712 WING RIB STRUCTURE
5713 WING LONGERON/STRINGER
5714 WING CENTER BOX
5720 WING MISCELLANEOUS STRUCTURE
5730 WING PLATES/SKINS
5740 WING ATTACH FITTINGS
5741 WING, FUSELAGE ATTACH FITTINGS
5742 WING, NAC/PYLON ATTACH FITTINGS
5743 WING, LANDING GEAR ATTACH FITTINGS
5744 CONTROL SURFACE ATTACH FITTINGS
5750 WING CONTROL SURFACE STRUCTURE
5751 AILERON STRUCTURE
5752 AILERON TAB STRUCTURE
5753 TE FLAP STRUCTURE
5754 LEADING EDGE DEVICE STRUCTURE
5755 SPOILER STRUCTURE

61 PROPELLERS/PROPULSORS

6100 PROPELLER SYSTEM
6110 PROPELLER ASSEMBLY
6111 PROPELLER BLADE SECTION
6112 PROPELLER DE-ICE BOOT SECTION
6113 PROPELLER SPINNER SECTION
6114 PROPELLER HUB SECTION
6120 PROPELLER CONTROL SYSTEM
6121 PROPELLER SYNCHRONIZER SECTION
6122 PROPELLER GOVERNOR
6123 PROPELLER FEATHERING/REVERSING
6130 PROPELLER BRAKING
6140 PROPELLER INDICATING SYSTEM

62 MAIN ROTOR

6200 MAIN ROTOR SYSTEM
6210 MAIN ROTOR BLADES
6220 MAIN ROTOR HEAD
6230 MAIN ROTOR MAST/SWASHPLATE
6240 MAIN ROTOR INDICATING SYSTEM

63 MAIN ROTOR DRIVE

6300 MAIN ROTOR DRIVE SYSTEM
6310 ENGINE/TRANSMISSION COUPLING
6320 MAIN ROTOR GEARBOX
6321 MAIN ROTOR BRAKE
6322 ROTORCRAFT COOLING FAN SYSTEM
6330 MAIN ROTOR TRANSMISSION MOUNT
6340 ROTOR DRIVE INDICATING SYSTEM

64 TAIL ROTOR

6400 TAIL ROTOR SYSTEM
6410 TAIL ROTOR BLADE
6420 TAIL ROTOR HEAD
6440 TAIL ROTOR INDICATING SYSTEM

65 TAIL ROTOR DRIVE

6500 TAIL ROTOR DRIVE SYSTEM
6510 TAIL ROTOR DRIVE SHAFT
6520 TAIL ROTOR GEARBOX
6540 TAIL ROTOR DRIVE INDICATING SYSTEM

67 ROTORS FLIGHT CONTROL

6700 ROTORCRAFT FLIGHT CONTROL
6710 MAIN ROTOR CONTROL
6711 TILT ROTOR FLIGHT CONTROL
6720 TAIL ROTOR CONTROL SYSTEM
6730 ROTORCRAFT SERVO SYSTEM

71 POWERPLANT

7100 POWERPLANT SYSTEM
7110 ENGINE COWLING SYSTEM
7111 COWL FLAP SYSTEM
7112 ENGINE AIR BAFFLE SECTION
7120 ENGINE MOUNT SECTION
7130 ENGINE FIRESEALS
7160 ENGINE AIR INTAKE SYSTEM
7170 ENGINE DRAINS

72 TURBINE/TURBOPROP ENGINE

7200 ENGINE (TURBINE/TURBOPROP)
7210 TURBINE ENGINE REDUCTION GEAR
7220 TURBINE ENGINE AIR INLET SECTION
7230 TURBINE ENGINE COMPRESSOR SECTION
7240 TURBINE ENGINE COMBUSTION SECTION
7250 TURBINE SECTION
7260 TURBINE ENGINE ACCESSORY DRIVE
7261 TURBINE ENGINE OIL SYSTEM
7270 TURBINE ENGINE BYPASS SECTION

73 ENGINE FUEL & CONTROL

7300 ENGINE FUEL & CONTROL
7310 ENGINE FUEL DISTRIBUTION
7311 ENGINE FUEL-OIL COOLER
7312 FUEL HEATER
7313 FUEL INJECTOR NOZZLE
7314 ENGINE FUEL PUMP
7320 FUEL CONTROLLING SYSTEM
7321 FUEL CONTROL/ELECTRONIC
7322 FUEL CONTROL/CARBURETOR
7323 TURBINE GOVERNOR
7324 FUEL DIVIDER
7330 ENGINE FUEL INDICATING SYSTEM
7331 FUEL FLOW INDICATING
7332 FUEL PRESSURE INDICATING
7333 FUEL FLOW SENSOR
7334 FUEL PRESSURE SENSOR

74 IGNITION

7400 IGNITION SYSTEM
7410 IGNITION POWER SUPPLY
7411 LOW TENSION COIL
7412 EXCITER
7413 INDUCTION VIBRATOR
7414 MAGNETO/DISTRIBUTOR
7420 IGNITION HARNESS (DISTRIBUTION)
7421 SPARK PLUG/IGNITER
7430 IGNITION SWITCHING

75 AIR

7500 ENGINE BLEED AIR SYSTEM
7510 ENGINE ANTI-ICING SYSTEM
7520 ENGINE COOLING SYSTEM
7530 COMPRESSOR BLEED CONTROL
7531 COMPRESSOR BLEED GOVERNOR
7532 COMPRESSOR BLEED VALVE
7540 BLEED AIR INDICATING SYSTEM

76 ENGINE CONTROLS

7600 ENGINE CONTROLS
7601 ENGINE SYNCHRONIZING
7602 MIXTURE CONTROL
7603 POWER LEVER
7620 ENGINE EMERGENCY SHUTDOWN SYSTEM

77 ENGINE INDICATING

7700 ENGINE INDICATING SYSTEM
7710 POWER INDICATING SYSTEM
7711 ENGINE PRESSURE RATIO (EPR)
7712 ENGINE BMEP/TORQUE INDICATING
7713 MANIFOLD PRESSURE (MP) INDICATING
7714 ENGINE RPM INDICATING SYSTEM
7720 ENGINE TEMP. INDICATING SYSTEM
7721 CYLINDER HEAD TEMP (CHT) INDICATING
7722 ENG. EGT/TIT INDICATING SYSTEM
7730 ENGINE IGNITION ANALYZER SYSTEM
7731 ENGINE IGNITION ANALYZER
7732 ENGINE VIBRATION ANALYZER
7740 ENGINE INTEGRATED INSTRUMENT SYSTEM

78 ENGINE EXHAUST

7800 ENGINE EXHAUST SYSTEM
7810 ENGINE COLLECTOR/TAILOPIPE/NOZZLE
7820 ENGINE NOISE SUPPRESSOR
7830 THRUST REVERSER

79 ENGINE OIL

7900 ENGINE OIL SYSTEM (AIRFRAME)
7910 ENGINE OIL STORAGE (AIRFRAME)
7920 ENGINE OIL DISTRIBUTION (AIRFRAME)
7921 ENGINE OIL COOLER
7922 ENGINE OIL TEMP. REGULATOR
7923 OIL SHUTOFF VALVE
7930 ENGINE OIL INDICATING SYSTEM
7931 ENGINE OIL PRESSURE
7932 ENGINE OIL QUANTITY
7933 ENGINE OIL TEMPERATURE

80 STARTING

8000 ENGINE STARTING SYSTEM
8010 ENGINE CRANKING
8011 ENGINE STARTER
8012 ENGINE START VALVES/CONTROLS

81 TURBOCHARGING

8100 EXHAUST TURBINE SYSTEM (RECIP)
8110 POWER RECOVERY TURBINE (RECIP)
8120 EXHAUST TURBOCHARGER

82 WATER INJECTION

8200 WATER INJECTION SYSTEM

83 ACCESSORY GEARBOXES

8300 ACCESSORY GEARBOXES

85 RECIPROCATING ENGINE

8500 ENGINE (RECIPROCATING)
8510 RECIPROCATING ENGINE FRONT SECTION
8520 RECIPROCATING ENGINE POWER SECTION

8530 RECIPROCATING ENGINE CYLINDER SECTION
8540 RECIPROCATING ENGINE REAR SECTION
8550 RECIPROCATING ENGINE OIL SYSTEM

MECHANICS CREED

UPON MY HONOR I swear that I shall hold in sacred trust the rights and privileges conferred upon me as a certified mechanic. Knowing full well that the safety and lives of others are dependent upon my skill and judgment, I shall never knowingly subject others to risks which I would not be willing to assume for myself, or for those dear to me.

IN DISCHARGING this trust, I pledge myself never to undertake work or approve work which I feel to be beyond the limits of my knowledge; nor shall I allow any non-certificated superior to persuade me to approve aircraft or equipment as airworthy against my better judgment; nor shall I permit my judgment to be influenced by money or other personal gain; nor shall I pass as airworthy aircraft or equipment about which I am in doubt, either as a result of direct inspection or uncertainty regarding the ability of others who have worked on it to accomplish their work satisfactorily.

I REALIZE the grave responsibility which is mine as a certified airman, to exercise my judgment on the airworthiness of aircraft and equipment. I, therefore, pledge unyielding adherence to these precepts for the advancement of aviation and for the dignity of my vocation.